Teacher Evaluation Practices
[illegible] Alberta

Summary Report

Planning Services

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EDUCATION

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AN ASSESSMENT OF FORMAL TEACHER EVALUATION PRACTICES IN ALBERTA

(SUMMARY)

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ABSTRACT

This study investigated the formal teacher evaluation practices of superintendents, other central office staff, and principals.

A questionnaire collected data on their evaluation practices between September 1983 and April 1984: (1) demographic data on the responding evaluator; (2) data related to initiating factors, purposes, and outcomes of their last teacher evaluation; and (3) data on the evaluative procedures they used in that evaluation.

Experts in "due process" and "improvement of instruction" adjudicated items in part 3 to establish minimum criteria for satisfactory evaluation.

Respondents generally placed a high priority on teacher evaluation, but had inadequate time.

Less than half of the respondents followed board policy "strictly to the letter." Two-thirds of the respondents gave a positive rating to the last teacher evaluated.

Of the teachers evaluated, 60.8% were tenured, and 39.2% were first year teachers, or new to the school/system. Junior high teachers comprised the largest group evaluated, and language arts and math were the subjects most observed.

The majority of evaluations were initiated as routine evaluations, with primary purposes to: improve the teacher's performance, award a permanent contract, provide a

basis for retention in position, or recommend permanent certification. As a result, most teachers were retained in their present position, received a permanent contract, or were recommended for permanent certification.

Very few of the respondents (4.5%) met the minimum criteria to assure due process and fewer (1.3%) met the criteria for improvement of instruction.

The completeness of the evaluation (i.e., score on part 3 of the questionnaire) correlated positively with time spent in classroom observation, number of observation visits, priority of teacher evaluation, and number of related university courses.

Where the purpose or outcome of the evaluation related to inservice needs, the completeness of the evaluation correlated positively with the purpose or outcome.

Where the purpose or outcome of the evaluation related to a recommendation for permanent certification, the completeness of the evaluation correlated negatively with the purpose or outcome.

No relationship was found between the presence of a written policy on formal teacher evaluation and the completeness of the evaluation, nor was the level of adherence to policy significantly related to completeness.

SUMMARY

Introduction

The case of James Keegstra (Keegstra v. County of Lacombe, 1983), who was dismissed from his teaching position, rekindled public and political interest in the evaluation of teachers. This renewed interest contributed to the development, in 1984, of a teacher evaluation policy by Alberta Education. In essence, this policy requires that Alberta school jurisdictions put into place fair and consistent board policies to assure the regular evaluation of teachers for the purposes of (1) assisting in the professional development of teachers, and (2) taking appropriate action with respect to teachers whose performance is unacceptable.

This study provides benchmark data for assessing the impact of the Alberta Education policy, and information to stakeholder groups on current practices and the minimum criteria to be met for satisfactory teacher evaluation.

The primary purpose of this study was to describe the state of formal teacher evaluation in Alberta in the 1983-84 school year. The specific aims were:

1. To collect demographic information about the evaluators and teachers involved in formal teacher evaluation in Alberta.

2. To describe the initiating factors, intended purposes and outcomes of formal teacher evaluation.
3. To describe the procedures used by evaluators in formally evaluating teachers.
4. To analyze the quality of teacher evaluation procedures with respect to minimum requirements to improve instruction and to assure due process.
5. To identify the relationships between selected demographic factors and the completeness of the evaluation.

The Literature

The literature related to teacher evaluation is extensive, diverse, and sometimes contradictory. The review of the literature for this study traced the development of evaluation from its beginnings as an inspectoral, autocratic process (Burton & Brueckner 1955), through the "scientific" and "democratic" models of the early twentieth century (Lucio & McNeil, 1962; Wiles & Lovell, 1967); to the multigoal, democratic interactive process exemplified by Acheson's (1982) model of the clinical supervision process.

The literature identifies a great many purposes for teacher evaluation, but they can all be incorporated into two major categories, namely purposes related to the improvement of the teacher's instructional performance, and purposes involving judgemental functions related to decision making and teacher competency.

The profound impact of the evaluation of teachers on student learning is dealt with in some early literature (Burton, 1922; Barr, Burton & Breuckner, 1938), but more recent research (e.g., Amidon & Flanders, 1963; Berliner, 1982; Hersh, 1981; Medley & Crook, 1982) has focussed upon teaching behaviors rather than student outcomes. Much of this research is ambiguous or contradictory, and the effectiveness of any given approach is often dependent upon the particular goals of education for the given situation.

In recent years a number of models of teacher evaluation have been developed which involve the establishment of goals and some level of teacher input. The Manatt "Mutual Benefit Evaluation" (Manatt, Palmer & Hibblebaugh, 1976), and Redfern's (1980) "Management by Objectives" models are examples. The flexible, multigoal model which has achieved prominence today is the "Clinical Supervision" model initially developed by Goldhammer (1969) and Cogan (1973).

Teacher evaluation in Alberta is the subject of a great many opinion articles but few research studies. The studies have tended to focus upon the superintendent's perception of the policies and practices prevalent in their jurisdiction; however, one recent study (Townsend, 1984) documented the process of implementation of a new policy on teacher supervision and evaluation, and demonstrated that high levels of acceptance, participation, and satisfaction with the process can be attained through appropriate implementation strategies.

The dearth of research on teacher evaluation in Alberta illustrates the need for more information on current practices, particularly with respect to improvement of instruction and due process criteria, namely, those processes common to the clinical supervision model.

The Design of the Study

To assess the state of formal teacher evaluation in Alberta, the following steps were taken:

1. A three part questionnaire, based upon existing instruments, was developed. Section one collected demographic data about the responding evaluator. Section two addressed the "last formal teacher evaluation carried out," and collected data related to the initiating factors, purposes, and outcomes of that evaluation. Section three, the Modified Acheson/Shinn instrument, collected data on the supervisory practices used in the last formal teacher evaluation.

2. The questionnaire was administered to a study group consisting of all Alberta superintendents, all other central office staff who were members of the Conference of Alberta School Superintendents as of December 1983, and a 25% sample of Alberta school principals.

3. Minimum criteria for satisfactory evaluation in the areas of "due process" and "improvement of instruction" were established by submitting Section 3 of the questionnaire, the Modified Acheson/Shinn instrument, to experts for adjudication. Teacher perceptions of appropriate evaluation strategies were assessed by administering the Modified Acheson/Shinn instrument to a sample of teachers.

4. Data from the questionnaires were processed using the SPSSX Sprint package. Frequency distributions and means were generated for all variables. Ratings by experts and teachers of the 37 items on the Modified Acheson/Shinn instrument were summed and averaged and three subsets delineating the minimum criteria for satisfactory evaluation in the areas of due process, improvement of instruction, and teacher perception were generated. Demographic factors were described and the relationships between the demographic variables and the scores on the Modified Acheson/Shinn instrument and its subsets were examined.

Findings

Five hundred and sixty six questionnaires were sent to superintendents, other central office staff, and principals, and a total of 484 usable replies were received, resulting in an 85.5% return rate for the group. Of the 106 superintendents surveyed, 99 (93.4%) returned usable responses, other central office staff returned 97 (85.8%) of the 116 questionnaires sent to them, and principals responded by returning 288 (83.3%) of the 347 questionnaires sent out.

The findings were as follows:

1. On average, superintendents had 13.8 years experience in teacher evaluation, had undertaken 1.87 university courses related to teacher evaluation, and had engaged in 18.5 hours of related inservice training in the last five years. By comparison, other central office staff had 11.4 years experience, 1.76 university courses, and 23.4 hours of inservice training. Principals averaged 9.3 years experience, had taken 1.0 university courses, and 14.9 hours of inservice training.

2. Not all respondents were involved in teacher evaluation during the study period but 71.7% of superintendents, 67% of other central office staff, and 73.3% of principals reported that they had evaluated one or more teachers. Of the respondents who did evaluate teachers, superintendents averaged 20.8 teachers, other central office staff, 25.1 teachers and principals, 8.7 teachers.

3. During the study period, respondents reported a total of 4,924 evaluations performed. Of these, superintendents did 29.5%, other central office staff did 33.1%, and principals did 37.3%. Of the evaluations performed, 21.9% were of first year teachers, 17.3% were of

experienced teachers new to the school/system, and 60.8% were of tenured teachers.

4. Respondents, especially superintendents, generally rated teacher evaluation as a high priority item in relation to all their other duties, but most respondents considered the time available to be inadequate. Respondents who rated teacher evaluation as a high priority scored significantly higher on the Modified Acheson/Shinn instrument, the measure of the completeness of the evaluation; however, the perceived amount of time available had no significant impact on the completeness of the evaluation.

5. Over 80% of respondents indicated that their jurisdiction had a written policy on formal teacher evaluation, but less than 50% of the respondents who evaluated teachers followed the policy "strictly to the letter." Neither the presence of policy, nor the degree to which it was followed, showed any significant relationship to the completeness of the evaluation.

6. Over 80% of respondents made two or more classroom visits during the last formal teacher evaluation, and the average time spent in classroom observation was over two hours. Junior high teachers comprised the largest group of teachers evaluated and language arts and math were the subjects most commonly observed. Respondents who made more classroom visits or spent more time in classroom observation during the last formal teacher evaluation scored

significantly higher on the completeness measure than those who visited less often, or spent less time in observation. The grade level and subject observed (except science) was not significantly related to the completeness of the evaluation.

7. The majority of the last formal teacher evaluations carried out by the study group were initiated (Table 1) as routine evaluations according to school board policy. Their primary purposes (Table 2) were: to improve the performance of the teacher, to award a permanent contract, to provide a basis for retention in position, or to recommend for permanent certification. As a result of the evaluation (Table 3), most teachers were retained in their present position, received a permanent contract or were recommended for permanent certification. Teacher dismissal was cited as a primary purpose of the evaluation by 4.1% of respondents and was reported as an outcome of the evaluation by 4.8% of respondents. Formal teacher evaluation was rarely used as a basis for transfer or promotion.

8. When the evaluation was initiated as a routine evaluation according to district policy, respondents scored significantly higher on the completeness measure than when they did not. Other initiating factors were not significant in affecting the completeness of the evaluation.

When the primary intended purpose of the last formal evaluation was to improve the performance of the teacher, or

TABLE 1. Primary Condition Involved in Initiating the Last Formal Teacher Evaluation

Initiating Factor		Percentage of Responses	
	S	O	P *
N =	(82)	(73)	(231)
District policy: Routine evaluation	57.3%	60.3%	66.7%
Need for documentation	17.1%	13.7%	11.7%
Teacher request	9.8%	9.6%	5.6%
Concerns after informal observations	7.3%	5.5%	6.5%
Parental complaint	3.7%	6.8%	5.2%
Other	4.9%	4.1%	4.3%

* S = Superintendents
O = Other Central Office Staff
P = Principals

TABLE 2. Primary Intended Purpose of the Last Formal Evaluation

Primary Intended Purpose	Percentage of Responses		
	S	O	P *
N =	(88)	(77)	(259)
Improving performance of teacher	19.3%	31.2%	29.3%
Awarding a permanent contract	26.1%	28.6%	12.7%
Basis for retention in position	19.3%	13.0%	13.9%
Recommending permanent certification	14.8%	7.8%	10.4%
Determining inservice needs	5.7%	5.2%	7.7%
Basis for dismissal	5.7%	7.8%	2.3%
Basis for transfer	1.1%	0%	3.5%
Recording the performance of a resigning/retiring teacher	1.1%	1.3%	1.9%
Basis for promotion	1.1%	1.3%	1.2%
Other	5.7%	5.2%	17.0%

* S = Superintendents
O = Other Central Office Staff
P = Principals

TABLE 3. Outcome of the Last Formal Teacher Evaluation

Outcome of the Evaluation The teacher was/will:		Percentage of Responses S (87)	 O (87)	 P * (258)
	N =			
continue in present position		35.6%	36.7%	45.7%
receive a permanent contract		20.7%	20.7%	11.2%
be recommended for permanent certification		14.9%	8.0%	12.4%
assisted with an inservice plan		4.6%	14.9%	10.1%
dismissed		9.0%	4.6%	3.5%
seen by another evaluator		4.6%	4.6%	4.7%
promoted		0%	3.4%	1.6%
challenge the evaluation report		0%	1.1%	0.8%
Other		10.3%	5.7%	10.1%

* S = Superintendents
O = Other Central Office Staff
P = Principals

to record the performance of a resigning or retiring teacher, respondents scored significantly higher on the completeness measure than when it was not. When the purpose was to recommend for permanent certification, respondents scored significantly lower on the completeness measure. Other intended purposes did not significantly influence the respondents' score on the completeness measure.

When, as a result of the evaluation, an inservice plan was developed for the teacher, respondents scored higher on the completeness measure than when no plan was developed. If the teacher was recommended for permanent certification as a result of the evaluation, the respondents scored significantly lower on the completeness measure.

9. Experts identified 17 of the 37 items on the Modified Acheson/Shinn instrument as essential to assuring due process in formal teacher evaluation (Table 4). In essence, the items related to due process suggest that: (i) standards of performance must be developed for the teacher, (ii) a variety of objective data must be collected, (iii) a post conference must be held with the teacher to discuss the data and develop recommendations for improvement, (iv) a plan of assistance must be developed for the teacher, and (v) the teacher must be given a copy of the evaluation report and the opportunity to respond in writing.

Experts in improvement of instruction identified 25 of the Modified Acheson/Shinn items as essential (Table 4). In

TABLE 4. Experts' Ratings of Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	I	P	T*
25	Met with teacher after observation	1.00	1.00	1.16
20	Observed for at least 30 minutes	1.00	1.00	1.43
35	Teacher received a copy of report	1.13	1.33	1.10
32	Developed recommendations	1.50	1.00	1.39
34	Developed a plan of assistance	1.50	1.00	1.47
36	Teacher could respond in writing	1.13	1.66	1.32
33	Developed recommendations with teacher	1.25	1.66	1.23
37	Appeal procedure available	1.00	2.00	1.23
26	Solicited teacher analysis of data	1.50	1.66	1.29
31	Recommended resources	1.50	1.66	1.45
30	Gave praise and encouragement	1.25	2.33	1.32
27	Encouraged teacher inferences & opinions	1.38	2.33	1.19
28	Encouraged consideration of alternatives	1.29	2.00	1.71
22	Compared with Alberta Program of Studies	1.75	1.33	2.03
24	Examined student work	1.63	1.66	1.87
2	Standards of performance developed	1.57	1.66	2.00
3	Met prior to observation	1.75	2.00	1.52
12	Recorded data on on-task behavior	1.75	1.66	2.00
10	Recorded data on teacher questions	1.75	1.66	2.03
21	Examined teacher's planbook	1.63	1.66	2.19
5	Found teacher concerns	1.38	2.66	1.52
1	Had written job description	1.80	2.00	1.76
11	Recorded data on student responses	1.75	1.66	2.30
4	Found teacher expectations of students	1.75	2.50	1.48
29	Listened more than I talked	1.43	2.66	1.87
23	Examined record of student achievement	2.13	1.66	2.19
13	Recorded data on patterns of response	1.75	2.00	2.38
7	Teacher chose observational strategies	1.88	3.00	1.77
8	Recorded impressions about classroom	2.25	2.33	2.20
19	Recorded student/teacher interactions	1.88	2.66	2.33
16	Recorded data on student movement	2.50	2.33	2.53
9	Made notes of classroom dialogue	2.50	2.33	2.53
15	Recorded data on teacher movement	2.35	2.66	2.50
6	Suggested observational techniques	2.17	3.00	2.00
18	Recorded data on specific student	3.00	2.66	2.93
17	Made video recordings	2.69	3.33	3.14
14	Made audio recordings	2.88	3.33	2.97

*I = Mean score of ratings by experts in improvement of instruction; P = Mean score of ratings by experts in due process; T = Mean score of teacher ratings

Items rated as "essential" have a mean score between 1.00 and 1.75

essence the improvement of instruction criteria would require that the due process criteria be met, and: (i) a preconference must be held to discover what the teacher expected the students to be doing, and to discern what problems or concerns the teacher had, (ii) during the post conference, greater teacher input should be sought and appropriate praise and encouragement given, and (iii) a formal appeal procedure should be available if the teacher challenged the report.

10. The sixteen items identified as essential by teachers (Table 4) form a subset of the improvement of instruction items. The most notable differences fell in the areas related to the establishment of standards and the collection of objective data. Teachers rated these items lower than either of the groups of experts, and no objective data collection strategies were rated as essential by teachers. In addition, teachers rated teacher input items higher than either group of experts.

11. The patterns of "yes" responses to the 37 items on the Modified Acheson/Shinn instrument (Table 5) were somewhat similar for superintendents, other central office staff, and principals; however, noteworthy differences occurred on ten items:

Less than half the superintendents, but more than three quarters of other central office staff and principals met with the teacher prior to the classroom observation (Item 3).

TABLE 5. Comparative Ranking of "Yes" Responses to Items on the Acheson/Shinn Instrument

Item #	Descriptor	Rank A*	Rank S	Rank O	Rank P
25	Met with teacher after observation	1	1	1.5	1
20	Observed for at least 30 minutes	2	2	1.5	4
35	Teacher received a copy of report	3	5	4.5	2
30	Gave praise and encouragement	4	10	7	3
19	Recorded student/teacher interactions	5.5	3	10.5	8
24	Examined student work	5.5	5	4.5	11
8	Recorded impressions about classroom	7	5	4.5	12
12	Recorded data on on-task behavior	8.5	12	8	9.5
27	Encouraged teacher inferences & opinions	8.5	14.5	9	6
37	Appeal procedure available	10	19	12.5	5
36	Teacher could respond in writing	11	14.5	14	7
5	Found teacher concerns	12	8	10.5	13.5
4	Found teacher expectations of students	13	13	15	13.5
21	Examined teacher's planbook	14	7	4.5	16
26	Solicited teacher analysis of data	15	17.5	16	15
3	Met prior to observation	16	25	20.5	9.5
32	Developed recommendations	17	10	12.5	18.5
28	Encouraged consideration of alternatives	18	17.5	17.5	17
11	Recorded data on student responses	19	20	19	18.5
22	Compared with Alberta Program of Studies	20	16	22	22
10	Recorded data on teacher questions	21	21.5	17.5	21
23	Examined record of student achievement	22	10	20.5	26
33	Developed recommendations with teacher	23	27	25	20
2	Standards of performance developed	24	24	26	23
9	Made notes of classroom dialogue	25	21.5	23	24
13	Recorded data on patterns of response	26	33	21	35
18	Recorded data on specific student	27	26	24	27
15	Recorded data on teacher movement	28	28	28	28.5
16	Recorded data on student movement	29	29	29	28.5
1	Had written job description	30	30.5	30	31
31	Recommended resources	31	30.5	27	33
29	Listened more than I talked	32	34	33	30
34	Developed a plan of assistance	33	32	32	35
7	Teacher chose observational strategies	34	35	34	32
6	Suggested observational techniques	35	33	35	34
14	Made audio recordings	36	36	36.5	36
17	Made video recordings	37	37	36.5	37

Spearman Rank Order Correlation Coefficients:

S:O $r = .94; p < .01$

S:P $r = .84; p < .01$

O:P $r = .90; p < .01$

* A = All respondents; S = Superintendents; O = Other Central Office Staff; P = Principals

An appeal procedure (Item 37) was more likely to be made available when the evaluation was carried out by a principal (91.5%), than when carried out by other central office staff (87.7%), or superintendents (69%).

Superintendents and other central office staff were more likely than principals to record student/teacher interactions (Item 19), record impressions about the classroom (Item 8), examine students' work (Item 24), and examine the teacher's planbook (Item 21). In addition, superintendents placed a greater emphasis upon the examination of the record of student achievement (Item 23).

Principals, more than other central office staff, and superintendents: encouraged teacher input in the post observation conference (Item 27), gave praise and encouragement (Item 30), and provided the opportunity for the teacher to respond to the report in writing (Item 36).

Superintendents developed recommendations to help the teacher improve instruction (Item 32) more frequently than other central office staff or principals.

12. Few of the respondents met the minimum criteria to assure due process (4.5%), and fewer met the criteria for the improvement of instruction (1.3%). Essential due process items not used in the last evaluation by more than 50% of respondents were:

Item 34, the development of a plan of assistance (superintendents, other central office staff, and principals).

Item 31, the recommendation of resources (superintendents and principals).

Item 23, the examination of the record of student achievement (principals).

Item 33, the development of recommendations in cooperation with the teacher (superintendents).

The items essential for the improvement of instruction that were not used by more than 50% of respondents included Items 34, 31, and 33 as noted above and:

Item 29, I listened more than I talked (superintendents, other central office staff, and principals).

Item 3, I met with the teacher prior to the observation (superintendents).

Twenty nine (8.3%) of the respondents met the minimum criteria established in the teacher perception subset. The items deemed essential by teachers that were not used by more than 50% of respondents were Items 34, 31, 33, and 3 as noted above.

Conclusions and Implications

Demographic Factors

The demographic factors that relate to the respondents and that are positively correlated with a significantly more complete evaluation are: the placing of a high priority on teacher evaluation, and high levels of university training. In addition, a positive correlation exists between these two factors.

Experience (except in the case of superintendents where there was a statistically significant negative correlation), the amount of inservice training, the number of teachers supervised and the adequacy of the time available for teacher evaluation were not significantly related to completeness.

This implies that, in the selection of personnel who will have a major responsibility in the area of teacher evaluation, the primary criteria should include those related to a commitment to teacher evaluation and adequate related university training.

Inservice Training

The lack of a significant relationship between inservice training and the completeness of the evaluation is almost certainly due to the model of inservice training commonly in use in Alberta, namely the "single shot," one or two day lecture or workshop. Studies by Joyce and Showers (1981) indicate that, for inservice training to cause a change in behavior, five training elements are essential: theory, demonstration, practice, feedback, and coaching. The "single shot" strategy can, at best, encompass the first four of these components. This, say Joyce and Showers, can result in a transfer effect of up to 10% at the classroom level. To achieve a substantial effect, all five elements, used in sequence are required. When this is done, a 90% transfer effect can be achieved.

The potential for the successful implementation of this model in Alberta is demonstrated by the positive outcomes reported in Townsend's (1984) study of the implementation of a policy on teacher evaluation in the Lethbridge School District # 51.

The implications of the present lack of a relationship between inservice training and completeness of evaluation, the Joyce and Showers (1981) research, and the Townsend (1984) study are far reaching. They suggest that, if a change in the evaluative behavior of superintendents, other central office staff, and principals is to be effected, the whole process of inservice training in Alberta should be restructured.

Policy

This study found no relationship between the presence of a written policy on formal teacher evaluation and the completeness of the last evaluation, nor was the level of adherence to policy significantly related to completeness; however, routine evaluations, initiated in accordance with board policy tended to be more complete than those not initiated for this reason. This suggests that school board policies may serve no useful purpose, except to initiate teacher evaluation.

In the prefatory stages of this study in 1983, the researcher collected and examined the teacher evaluation policies from the majority of Alberta school jurisdictions and encountered an incredible diversity of policies. They ranged from complex policies that incorporated clearly delineated strategies and instruments, to brief statements of intent; from policies clearly designed to assure due process, to policies that obviously contravened recent human rights legislation. This informal survey confirmed Reikie's (1977, p. v) statement that:

> Overall, there were few school systems with clearly structured evaluation policies and practices. Numerous jurisdictions appeared to have no policies regarding many facets of teacher evaluations. Among the jurisdictions there was a wide variety of practices. Few practices were found to be consistent across Alberta.

The absence of a relationship between policy and the completeness of teacher evaluation, and the documented lack of consistency of teacher evaluation policies across the province suggests that the development of teacher evaluation policies at the local board level may be an ineffective mechanism for the implementation of teacher evaluation practices across the province.

The State of Oregon, U.S.A., has adopted a statewide model which prescribes a basic form of teacher evaluation, consistent with the clinical supervision model, yet leaves local boards considerable autonomy within its basic guidelines. That model is delineated in Oregon Revised Statute 342.850:

> Teacher evaluation; form; personnel file content. (1) The district superintendent of every school district, including superintendents of education service districts, shall cause to have made at least annually but with multiple observations an evaluation of performance for each probationary teacher employed by the district and at least biennially for every other teacher. The purpose of the evaluation is to allow the teacher and the district to determine the teacher's development and growth in the teaching profession and to evaluate the performance of the teaching responsibilities. A form for teacher evaluation shall be prescribed by the State Board of Education and completed pursuant to rules adopted by the district school board.
>
> (2) (a) The district school board shall develop an evaluation process in consultation with school administrators and with teachers. If a school district's teachers are represented by a local bargaining organization, the board shall consult with the teachers belonging to and appointed by the local bargaining organization in the consultation required by this paragraph.
>
> (b) The district school board shall implement the evaluation process that includes:
>
> (A) The establishment of job descriptions and performance standards which include but are not limited to items included in the job description;
>
> (B) A preevaluation interview which includes but is not limited to the establishment of performance goals for the teacher, based on the job description and performance standards;
>
> (C) An evaluation based on written criteria which include the performance goals; and
>
> (D) A post-evaluation interview in which (i) the results of the evaluation are discussed with the teacher and (ii) a written program of assistance for improvement, if needed, is established.
>
> (c) Nothing in this subsection is intended to prevent a district from consulting with any other individuals.
>
> (3) Except in those districts having an average daily membership, as defined by ORS 327.006, of fewer than 200 students, the person or persons making the evaluations must hold teaching certificates. The evaluation shall be signed by the school official who supervised the teacher. A copy of the evaluation shall

be delivered to the teacher.
(4) The evaluation reports shall be maintained in the personnel files of the district.
(5) The evaluation report shall be placed in the teacher's file only after reasonable notice to the teacher.
(6) A teacher may make a written statement relating to any evaluation, reprimand, charge, action or any matter placed in the teacher's personnel file and such teacher's statement shall be placed in the personnel file.
(7) The personnel file shall be open for inspection by the teacher, the teacher's designees and the district school board and its designees. District school boards shall adopt rules governing access to personnel files, including rules specifying whom school officials may designate to inspect personnel files.

Minimum Criteria for Satisfactory Evaluation

As the findings of this study show, few respondents met the minimum criteria deemed necessary to assure due process or the improvement of instruction in formal teacher evaluation. The picture, however, is not as bleak as it first may seem, since the findings also reveal that, on average, evaluators carried out almost three quarters of the strategies necessary to meet those requirements, and repeating patterns were found in the items commonly omitted. This suggests that with appropriate training, most evaluator performance could be readily upgraded to meet the minimum criteria.

The strategies deemed essential by teachers differed from those of experts in that teachers gave lower rankings to items related to the establishment of standards and the collection of objective data. This suggests that teachers are anxious about evaluation and particularly those processes which are essential in termination cases, namely the due process items. The findings of this study suggest that the great majority of formal evaluations carried out are positive, rather than punitive in intent, and that the apparent fears exhibited by teachers are generally groundless. However, it would be folly to dismiss those fears, since, if one of the primary purposes of evaluation is to improve instruction, a negative perception of some of the essential processes could seriously inhibit the successful implementation of any useful program of evaluation.

Recommendations

As a result of the findings of this study, and the conclusions drawn therefrom, it is recommended that:

1. When engaging personnel whose major responsibility will be the evaluation of teachers, school boards hire persons who place a high priority upon teacher evaluation and who have appropriate related university training.

2. When organizing inservice training to upgrade evaluators in their jurisdictions, school boards ensure that the model of inservice training used is one that results in a change in behavior at the classroom level, namely, one that includes theory, demonstration, practice, feedback, and coaching.

3. That school boards involve classroom teachers in those inservice programs so that they become more knowledgeable, and more committed to the processes of formal evaluation.

4. The Government of Alberta enact legislation to ensure that teacher evaluation is carried out in a fair and consistent manner throughout the province.

Recommendations for Further Study

This study has described the formal teacher evaluation practices in Alberta during the period September 1, 1983 to April 30, 1984, as reported by superintendents, other central office staff, and principals. In addition, it has assessed the adequacy of the current evaluative practices with respect to minimum criteria in the areas of due process and the improvement of instruction, and explored the relationships between the completeness of the evaluation and demographic factors.

One limitation of this study is that it has described the current evaluative practices using data collected from the evaluators, not from those being evaluated. Other studies (e.g. Shinn, 1976) suggest that the perceptions of teachers and administrators may be different and so future studies might examine the teacher perspective in more depth.

Data collected in this study showed that teachers did not rate the establishment of standards of performance and objective data collection techniques as highly as did experts in due process and improvement of instruction. Future studies might focus on the reasons for this difference and the impact of inservice training upon teacher perceptions.

Joyce and Showers (1981) have demonstrated the need for a model of inservice training that includes theory, demonstration, practice, feedback, and coaching. They suggest that the transfer of knowledge into actual classroom practice occurs when all of these components are used in sequence. Future studies could explore the impact of this inservice model in improving the quality of teacher evaluation in Alberta.

The review of the literature revealed that, early in this century, researchers discovered that the evaluation of teachers had a dramatic effect on student outcomes. No recent studies were found describing the relationship between modern teacher evaluation strategies and student performance. Future studies might examine the differences between the performance of students in classrooms where the teachers are evaluated, as opposed to those where no teacher evaluation takes place.

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Teacher Evaluation Practices in Alberta

Planning Services

Alberta
EDUCATION

AN ASSESSMENT OF FORMAL TEACHER EVALUATION
PRACTICES IN ALBERTA

ANDREW NEILL DUNCAN
LAKELAND (PUBLIC) SCHOOL DISTRICT #5460

Under Contract to Alberta Education, Edmonton, Alberta
December 1984

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ABSTRACT

This study investigated the formal teacher evaluation practices of superintendents, other central office staff, and principals.

A questionnaire collected data on their evaluation practices between September 1983 and April 1984: (1) demographic data on the responding evaluator; (2) data related to initiating factors, purposes, and outcomes of their last teacher evaluation; and (3) data on the evaluative procedures they used in that evaluation.

Experts in "due process" and "improvement of instruction" adjudicated items in part 3 to establish minimum criteria for satisfactory evaluation.

Respondents generally placed a high priority on teacher evaluation, but had inadequate time.

Less than half of the respondents followed board policy "strictly to the letter." Two-thirds of the respondents gave a positive rating to the last teacher evaluated.

Of the teachers evaluated, 60.8% were tenured, and 39.2% were first year teachers, or new to the school/system. Junior high teachers comprised the largest group evaluated, and language arts and math were the subjects most observed.

The majority of evaluations were initiated as routine evaluations, with primary purposes to: improve the teacher's performance, award a permanent contract, provide a basis for retention in position, or recommend permanent certification. As a result, most teachers were retained in their present position, received a permanent contract, or were recommended for permanent certification.

Very few of the respondents (4.5%) met the minimum criteria to assure due process and fewer (1.3%) met the criteria for improvement of instruction.

The completeness of the evaluation (i.e., score on part 3 of the questionnaire) correlated positively with time spent in classroom observation, number of observation visits, priority of teacher evaluation, and number of related university courses.

Where the purpose or outcome of the evaluation related to inservice needs, the completeness of the evaluation correlated positively with the purpose or outcome.

Where the purpose or outcome of the evaluation related to a recommendation for permanent certification, the completeness of the evaluation correlated negatively with the purpose or outcome.

No relationship was found between the presence of a written policy on formal teacher evaluation and the completeness of the evaluation, nor was the level of adherence to policy significantly related to completeness.

CHAPTER I

INTRODUCTION

> Evaluation in education is universally endorsed, widely misunderstood, poorly planned, crudely implemented, haphazardly staffed, and even ignored when the results are in! Nonetheless, supervisors are coming to accept responsibility for the evaluation task by recognizing that it is essential for guiding the improvement of instruction process. (Harris, 1985, p. 189)

In December 1982, James Keegstra, a social studies teacher at the Eckville High School, Eckville, Alberta was dismissed from his position as a teacher in that school. At a subsequent Board of Reference hearing held in the Judicial District of Edmonton in April 1983, it came to light that Keegstra had, for a protracted period, been teaching a social studies program which differed substantially from the authorized Alberta curriculum and which was perceived to be anti-Jewish in content. It was adequately demonstrated that Keegstra's students had accepted, as fact, the distorted and biased view of history which had been presented to them (Keegstra v. County of Lacombe, 1983, pp. 19-21).

The Keegstra case naturally attracted a great deal of attention in the educational community and among the general public. Subsequently, the Honourable David King, Minister of Education, established a Minister's Consultative Committee on Tolerance and Understanding.

Ron Ghitter, the Chairman of the Minister's Committee, in addressing delegates at the Alberta School Trustees' Association Convention on November 29, 1983 in Calgary, Alberta stated:

> As unforgivable as the actions of the Eckville high school teacher (Jim Keegstra) may be, Eckville has raised our level of consciousness. In my view, Eckville illustrated an institutionalization of our educational system which has made it unresponsive and keeps it from acting in a responsive manner.
>
> In my mind, Eckville raises the question again of teacher evaluation. . . . and the procedures utilized in this province with respect to discipline of teachers, termination of teachers, and the whole process of teacher standards, the encouragement and rewarding of teachers with merit, and the ridding from our system of teachers who are incompetent. . . .
>
> I am aware of this association's concerns with respect to teacher evaluation. In many areas of this province, we have seen school boards who can proudly boast of evaluation programs within their systems that are thoughtful, that are fair, and are designed to ensure that they are acceptable, and I would speculate even welcomed by the teachers within the system.
>
> Within other school boards in this province, we have experienced little in the way of effective evaluation. Within many jurisdictions, the teachers could go for seven to 10 years without ever being evaluated, if at all. . . .
>
> Red herrings are dragged across the issue, with such discussion as who will do the evaluation, how can it be effective, why do we need evaluation when we can rely on the integrity of the individual teacher and on and on. . . .
>
> But the fact remains that if standards are to be achieved and if teachers are to be recognized for the excellent work they do in our schools there must be a place for evaluation. (pp. 20-24)

Since 1970, the prime responsibility for teacher evaluation has rested with the local jurisdiction, and an

Alberta Education Evaluation Policy issued in May 1984 reiterated this position (Alberta Education, 1984, p. 66).

Studies conducted in 1977 (Holdaway, 1977; Reikie, 1977) found that, although some 83% of the 114 Alberta school jurisdictions surveyed evaluated teachers new to the system, tenured teachers were evaluated far less frequently. In fact, only 53% of jurisdictions evaluated tenured teachers on any kind of a scheduled basis (e.g., once every three years). A survey conducted by the Planning and Research Branch of Alberta Education in September 1980 showed that, at that time, 90% of school jurisdictions evaluated first year teachers but that 33% of jurisdictions had no scheduled basis for the evaluation of tenured teaching staff. The same study also indicated that, of those jurisdictions indicating that they had a written evaluation policy, only 55% reported that they carried out the policy.

The implications of these studies are far reaching. They suggest that, although policies may require teachers to be evaluated according to some fixed schedule, in practice this may not occur and thus it is entirely possible that a new teacher may be granted tenure without a formal evaluation of performance, and a tenured teacher may teach for many years without ever being formally evaluated.

Is formal evaluation necessary? Isn't a trained teacher in possession of an appropriate teaching credential in the best position to judge his/her own performance? Isn't an external evaluation of a teacher a frightening, inhumane, and unnecessary experience for a highly trained professional?

The Keegstra case amply demonstrates what can happen when teachers are insufficiently monitored and Millman (1981) aptly summarizes the point:

> Teaching is not a solitary activity affecting no one. On the contrary, the lives of many students are altered in far-reaching and significant ways by the instructors with whom they interact. Teaching is too important to too many to be conducted without a critical inquiry into its worth. Besides, court cases have made it clear that students have rights, and schools and colleges have a responsibility to ensure the quality of their curriculum and instruction. The protection of rights and the fulfillment of responsibility require that teacher self-assessment be supplemented by evaluation by others. (p. 12)

Alberta Education states that "Evaluation of teacher performance is viewed as a vital component in ensuring that quality educational programs are provided to Alberta children" (1982, p. 8) and proposes eight purposes for teacher evaluation:

1. To promote, achieve, and maintain an acceptable quality of instruction.

2. To help improve performance of teachers in securing desirable instructional outcomes.

3. To provide information which will be useful when considering placement of staff, transfer, retention, promotion, tenure, and permanent certification.

4. To provide specific feedback concerning teacher performance.

5. To provide professional assistance to teachers in the performance of teaching tasks.

6. To provide a basis for planning in-service programs.

7. To provide written evaluation reports on teachers in public and private schools for purposes of documentation, as required.

8. To assist teachers in professional growth and development. (p. 8)

Of these purposes, items 1, 2, 4, 5, 6, and 8 essentially relate to the quality or improvement of instruction and items 3 and 7 refer to the documentation functions of evaluation.

The Holdaway (1977) and Reikie (1977) studies showed that in 1977, school jurisdictions used evaluation primarily for documentation: the awarding of permanent contracts (94%), recommendation for permanent certification (96%), and providing a basis for dismissal (83%). Evaluation was used to assist in improving teacher performance in only 18% of school jurisdictions.

The Alberta Education study of 1980 showed a marked change in the focus of teacher evaluation in a number of areas. Certification and the awarding of a permanent contract remained primary uses (90%), but use for the improvement of instruction had risen from 18% in 1977 to 83% in 1980.

Thus, we see the two major purposes for evaluation in Alberta, (1) the improvement of instruction, commonly called formative evaluation and (2) documentation for the purpose of staff placement, retention, transfer, promotion, tenure, and permanent certification, commonly called summative evaluation. In the former case, the evaluation strategies should be congruent with those that lead to improved performance, and in the latter case the evaluation practices must be fair and reasonable and allow the teacher "due process."

This situation is reflected in Alberta Education's Teacher Evaluation Policy which states that teachers will be evaluated to "assist in the provision of effective instruction to students and in the professional growth and development of teachers" (Alberta Education, 1984, p. 66). The policy requires that the results of the evaluation be used:

1. to assist in the professional development of teachers and,
2. to take appropriate action with respect to teachers whose performance is unacceptable.

In addition, the policies developed by School Boards should be fair and consistent and provide for due process.

A comparison of the results of the Holdaway (1977) and Reikie (1977) studies with those of the Alberta Education study indicated a distinct change in the emphasis in teacher evaluation. However, both studies sought to establish the current situation in Alberta by questioning School Superintendents on the policies and practices of their jurisdiction in preparing formal evaluations of teachers. These studies were limited in that they recorded only the superintendent's perceptions of the situation and Reikie (1977) regards this as a "significant limitation" to his study and suggests:

> Future studies might examine teacher evaluation policies and practices from the perspective of other personnel involved in the evaluation process such as school principals, teachers and other central office personnel. (p. 95)

He also suggests that:

> More specific descriptive information might initiate the development of viable proposals for change and improvement. (p. 56)

Clearly a situation exists in Alberta in which the actual "on site" evaluation practices are largely undocumented, and the current available data are limited to superintendents' perceptions. The situation has led to a renewed public and political interest in, and pressure for, increased monitoring of teachers.

The Alberta School Trustees' Association and the Alberta Teachers' Association have recent, or recently revised, position papers on teacher evaluation or performance appraisal; and Alberta Education has recently (May 1984) introduced a set of evaluation policies which include teacher evaluation.

It is abundantly clear that all concerned parties in Alberta are ready for a change, but a change from what? Before any meaningful change in teacher evaluation practices can be initiated, a thorough understanding of the status quo is necessary. As Reikie (1977) said, "A great need exists for a proportionately larger volume of research of an empirically descriptive nature" (p. 2).

The Purpose of the Study

The primary purpose of this study was to describe the state of formal teacher evaluation in Alberta in the 1983-1984 school year. The specific aims were:

1. to collect demographic information about the evaluators and teachers involved in formal teacher evaluation in Alberta.

2. To describe the initiating factors, intended purposes, and outcomes of formal teacher evaluation.

3. To describe the procedures used by evaluators in formally evaluating teachers.

4. To analyze the completeness of the teacher evaluation procedures used by evaluators in Alberta with respect to:

   (a) the improvement of instruction.

   (b) due process requirements.

5. To identify the relationships between demographic factors and the completeness of evaluation.

Justification for the Study

The Keegstra Case has, as Ghitter stated, "raised our level of consciousness" (1983, p. 20) with respect to what happens in the classroom. The case demonstrated, all too clearly, the inadequacy of some of the teacher evaluation practices in Alberta.

Judicious practice would suggest that School Boards in Alberta should have written policy on teacher evaluation, and Alberta Education, in May 1984, published policies which will require that each school jurisdiction "develop and adopt written policies, guidelines and procedures" (p. 66) for the evaluation of teachers.

This study is justified on the basis that it will provide information to Alberta Education, School Boards, administrators, teachers, professional organizations, and the public at large. That information is important because it can provide a basis for decision making in the areas of policy making, in service training, and in the implementation of more effective teacher evaluation practices.

Assumptions

The following assumptions were made:

1. Responses to the study were made in good faith.

2. The questions on the questionnaire were not interpreted ambiguously.

3. The data received on the questionnaires accurately reflected the beliefs and practices of the respondents.

4. The last formal teacher evaluation carried out by each of the respondents was typical of their usual evaluative practice.

Limitations

1. The study reflected the evaluative practices only as they applied to the formal evaluation of teachers in Alberta during the period September 1, 1983 to April 30, 1984.

2. The study reflected the evaluative practices only to the extent that "the last formal teacher evaluation carried out" exemplified the normal evaluative practice of each respondent.

Definition of Terms

Alberta Education. Alberta Education is that branch of the Alberta Provincial Government responsible for the provision of educational services at the primary, elementary, and secondary levels.

Board. Board means a board of trustees of a district or division.

Board of Reference. Board of Reference means the appeal body established pursuant to sections 95 to 99 of The School Act.

Conference of Alberta School Superintendents. Conference of Alberta School Superintendents means that organization whose membership consists of superintendents and other central office staff who are not full members of the Alberta Teachers Association.

County. County means those school districts under the jurisdiction of a County Council pursuant to The County Act.

County Act. County Act means Chapter C-27 of the Revised Statutes of Alberta 1980.

District. District means a school district established pursuant to The School Act.

Division. Division means a school division (consisting of any number of school districts) established pursuant to The School Act.

Formal Evaluation. Formal evaluation means an evaluation of a teacher that includes a written report leading to a recommendation or rating.

Other Central Office Staff. Other central office staff means those people employed by a school jurisdiction who were members of the Conference of Alberta School Superintendents as of December 1983.

Public School District. Public School District means a school district established pursuant to The School Act.

School Act. School Act means Chapter S-3 of the Revised States of Alberta 1980.

School Jurisdiction. School jurisdiction means a public school district or division, a separate school district, or a County.

Separate School District. Separate school district means a school district established pursuant to The School Act. Separate school districts may be formed within the boundaries of, or co-terminus with public school jurisdictions. If the public school jurisdiction is a non-Catholic jurisdiction, the separate district will provide a Roman Catholic education--and vice versa. The majority of separate school districts in Alberta are Roman Catholic.

Superintendent. Superintendent means the Superintendent of Schools of a school jurisdiction appointed by a Board pursuant to The School Act.

Teacher means a person who holds a certificate of qualification issued under the Department of Education Act and is employed by a school jurisdiction to instruct students in a school.

Tenured Teacher. Tenured teacher means a teacher who has been granted a continuous contract pursuant to The School Act.

CHAPTER II

REVIEW OF SELECTED LITERATURE

> The critics of the educational establishment are far from ready to see the abandonment of overt appraisals of teaching performance. There remains a strong feeling that formal evaluation is an essential guarantee that standards will be maintained. In actual fact, however, such a belief is largely illusory. (Fleming, 1971, p. 445)

The central purpose of this study is to describe the state of teacher evaluation in Alberta, and to this end, this review of the literature will focus upon the research related to supervisory and evaluative processes.

Evaluation and Supervision Defined

The literature contains a plethora of definitions of supervision and evaluation and the line dividing the meaning of these two terms is unclear.

Some of the very early definitions of supervision such as those cited by Barr, Burton and Brueckner (1947) were meaningless and today seem quite humorous: "the business of the supervisor is to cast a genial influence over his schools, but otherwise he is not to interfere with the work" or "supervision is the vision in the old and beautiful sense of seeing things invisible."

Many of the more recent definitions of supervision relate to its function in the improvement of instruction (Acheson & Gall, 1980; Alberta Education, 1984; Alberta Teachers' Association, 1980; Burton, 1922; Burton & Brueckner, 1955; Harris, 1975; Spears, 1953) yet many of the same authors acknowledge the need for supervisors to make judgements about the performance of a teacher and include this within their definition. For instance, Burton (1922) includes the rating of teachers in his definition and Acheson and Gall (1980) include the evaluation of teachers for promotion, tenure, or other decisions as one of their goals for clinical supervision.

Since the terms supervision and evaluation are often used synonymously in the literature, this review will examine the writing from that perspective.

The Evolution of Evaluation

Historically the philosophy underlying evaluation has undergone a number of significant changes. Burton and Brueckner (1955) describe the selection of teachers in the Massachusetts Bay Colony in 1654 wherein town selectmen secured teachers of "certain religious and moral qualities." By the early 1700s, inspection had appeared and, in Boston, committees of citizens were appointed to visit and inspect the schools.

Towns grew and schools increased in size until several teachers were working in one building. This resulted in the establishment of the "principal teacher" who performed certain administrative and managerial functions. However, the supervisory functions were not delegated to principals until much more recently. By the middle of the nineteenth century the office of "superintendent of schools" had appeared and, while in some cases he assumed supervisory responsibilities, school boards continued to retain most of the supervisory or inspectoral power.

Burton and Brueckner (1955), Lucio and McNeil (1962), and Wiles and Lovell (1967) identify a number of stages in the evolution of supervision in the twentieth century. The turn of the century saw supervision by specialists as new subjects were added to the curriculum. These supervisors were travelling teachers rather than lay people. Scientific supervision was the thrust of the 1920s. "Research and measurement were to be the domain of supervision. Teachers were to apply findings" (Lucio & McNeil, 1962).

During the 1930s and 40s, the emphasis was upon democratic supervision wherein the supervisor appealed to the feelings and emotions of the teacher to achieve the desired goals. In the late 1940s, this developed into a cooperative model in which the supervisory process was seen as: (1) the facilitation of interaction and mutual assistance among staff (Wiles & Lovel, 1967) and (2) the encouragement of wider participation of all the stakeholders in the educational endeavor in the formulation of mutually accepted educational goals (Lucio & McNeil, 1962).

Lucio and McNeil (1962) describe the 1950s as the age of supervision through reason and intelligence which they describe as "The specification of desired outcomes and appropriate behavior necessary to their attainment . . . Action through wide participation of all concerned in the processes of inquiry and the judgement of outcomes" (p. 12).

During the 1960s, Amidon and Flanders (1963), Flanders (1964), and Amidon and Hunter (1966) were leaders in the development of strategies designed to gather observational data so as to provide teachers with meaningful information for the purpose of changing or reinforcing behavior. However, the most significant development in the supervision of teachers in the last twenty years is, according to Sullivan (1980), the growth of the clinical supervision model developed by Morris Cogan and Robert Goldhammer, a process which Reavis (1977) sees as combining the fundamental precepts of the humanistic approach, democratic practices and the scientific method.

Thus we have seen a dramatic change in the focus of evaluation, a change from the traditional inspectoral model to a more democratic, analytical model. Burton and Brueckner (1955, p. 13) use "prominent catch words" to differentiate between traditional and modern styles of supervision:

Traditional	Modern
1. Inspection.	1. Study and analysis.
2. Teacher-focussed.	2. Focussed on aim, method, pupil, and environment.
3. Visitation and conference.	3. Many diverse functions.
4. Random and haphazard, or a meager, formal plan.	4. Definitely organized and planned.
5. Imposed and authoritarian.	5. Derived and cooperative.
6. One person usually.	6. Many persons.

Thus:

> Traditional supervision consists largely of inspection of the teacher by means of visitation and conference, carried on in a random manner, with directions imposed on the teacher by authority and usually by one person. Modern supervision, by contrast involves the systematic study and analysis of the entire teaching-learning situation utilizing a carefully planned program that has been cooperatively derived from the situation and which is adapted to the needs of those involved in it. (Burton & Brueckner, 1955, p. 13)

Purposes of Evaluation

The purposes of evaluation have been discussed by many researchers; as early as 1922 Burton (1922, pp. 9, 10) suggested that it dealt with the improvement of the teaching art and the improvement of teachers in service. Burton and Brueckner (1955) identify the purposes of supervision as "an expert technical service primarily aimed at studying and improving cooperatively all factors which affect child growth and development" (p. 10) and Harris (1985) says that supervision "is what school personnel do with adults and things to maintain or change the school operation in ways that directly influence the teaching processes employed to promote pupil learning" (p. 10).

The Alberta School Trustees Association (1982) states "The major objective of the program (or performance appraisal) is desired and specified improvement in teaching performance" and Wiles and Lovell (1967) would also include the development of human relations in his purposes: "supervision consists of all the activities related to morale, improving human relations, inservice education, and curriculum development" (p. 5).

Acheson and Gall (1980) identify the major aim as the improvement of teachers' classroom instruction and, in addition, list the following specific goals of clinical supervision:

> 1. To provide teachers with feedback on the current state of their instruction.
> 2. To diagnose and solve instructional problems.
> 3. To help teachers develop skill in using instructional strategies.
> 4. To evaluate teachers for promotion, tenure and other decisions.
> 5. To help teachers develop a positive attitude about continuous professional development. (pp. 12-14)

Similarly, other authors have identified a variety of purposes. Alberta Education (1982) identified eight purposes somewhat similar to those enumerated by Acheson and Gall (1980); Patterson (1974) and the Alberta Teachers' Association (1980a) identify two primary purposes:

1. For the improvement of the teacher's instructional performance and,
2. For judgemental functions related to decision making and teacher competency.

These two primary purposes may be categorized as formative and summative (Wittrock & Wiley, 1970; Cooley & Lohnes, 1976). Formative evaluations are performed with the intention of assisting teachers to improve their performance; summative evaluations culminate in reports which are used as a basis for judgementally rating the teachers.

Darling-Hammond, Wise, and Pease (1983), in an extensive review of the literature, identify four basic purposes for teacher evaluation: individual staff development, individual personnel (job status) decisions, school improvement, and school status (e.g., certification) decisions. They suggest that "many teacher evaluation systems are nominally intended to accomplish all four of these purposes, but different processes and methods are better suited to one or another of these objectives" (p. 302).

> In general, teacher evaluation processes most suited to accountability purposes must be capable of yielding fairly objective, standardized, and externally defensible information about teacher performance. Evaluation processes useful for improvement objectives

> must yield rich, descriptive information that illuminates sources of difficulty as well as viable courses for change. Teacher evaluation methods designed to inform organizational decisions must be hierarchically administered and controlled to ensure credibility and uniformity. Evaluation methods designed to assist decision making about individuals must consider the context in which the individual performance occurs to ensure appropriateness and sufficiency of data. (Darling-Hammond et al., 1983, p. 303)

Evaluation Processes

In discussing teacher evaluation, the Alberta School Trustees Association (1982) differentiates between teacher competence and teacher performance. "Competence, as defined by Webster, is 'having requisite or adequate ability or qualities; legally qualified or adequate.' Performance on the other hand, is defined as 'execution of an action; something accomplished'" (p. 1). The Association postulates that it is the performance area that should be the subject of teacher evaluation.

Medley (1982) suggests that teacher attributes may be categorized into teacher competency, teacher competence, teacher performance, and teacher effectiveness. Competency refers to any skill or piece of knowledge possessed by the teacher and relevant to the practice of teaching, competence relates to the competencies a teacher possesses, performance deals with what the teacher does on the job, and is situational in context, and effectiveness refers to the effect a teacher's performance has on students.

The processes used by evaluators to assess teacher competence, performance, and effectiveness are varied. Levin (1979) identified six methods of evaluating teachers. A similar, more comprehensive list of eight processes has been compiled by Darling-Hammond et al. (1984, pp. 304-308) and the main headings are presented here together with a condensed and paraphrased version of their descriptions.

1. Teacher Interviews. Teacher interviews or conferences have been widely used in the past and are an essential component of some of the modern evaluation strategies. In the past the interviews were often used for communicating performance appraisals or in the hiring or firing of teachers. Today, the involvement of teachers in preobservation conferences as well as postobservation interviews is seen as a useful tool in promoting professional growth.

2. Competency Tests. There is a growing trend for the use of standardized tests in the initial certification and hiring of teachers and an increasing belief that such tests have value for recertification and dismissal decisions. The most widely used test is the National Teacher Examination which is administered to as many as 75,000 teacher candidates in 24 states and 311 school districts each year.

3. Indirect Measures. Indirect measures include training, experience, commitment to extracurricular activities etc. and while such measures are linked to salary and promotion, there is no evidence to suggest that they differentiate between effective or ineffective teachers.

4. Classroom Observations. Coupled with teacher interviews or conferences, this method is undoubtedly the mainstay of current teacher evaluation practice. Holley and Evertson (1981, p. 90) say that classroom observation reveals "a view of the climate, rapport, interaction and functioning of a classroom available from no other source."

5. Student Ratings. Student ratings are commonly used at the college level and some authors believe that they could be applied at the secondary, and perhaps even at elementary levels. Some studies have shown a modest correlation between student ratings of teachers and student achievement, but questions about their validity and utility limit their acceptance.

6. Peer Review. In this process the teacher is evaluated by a committee of peers who examine the whole teaching assignment. Research in this area shows divergent results and the method is unsuitable for evaluations involving personnel decisions.

7. Student Achievement. Since the ultimate aim of teaching is student learning, it would seem reasonable to assess teacher competency or performance by measuring student achievement on test scores. Studies of the reliability of student test scores as a measure of teacher effectiveness consistently indicate that reliability is low (Brophy, 1973; Rosenshine, 1970).

8. Faculty Self Evaluations. Faculty self evaluation has joined other sources as a technique in teacher evaluation. The process is clearly unsuitable for accountability or personnel decisions but may have value in that it permits the teacher to assess his or her own strengths and weaknesses and may promote teacher professionalism. (condensed and paraphrased from Darling-Hammond et al., 1984, pp. 303-308)

The discussion above suggests that techniques available for evaluation serve a variety of purposes. Some seek to measure competence by testing the teacher, others rate performance through observational and interview strategies, while still others seek to measure teacher effectiveness by measuring the outcomes of teaching. The low levels of reliability of most of these measures tend to suggest that any single approach for assessing competence, performance, or effectiveness is unlikely to provide a sound basis for useful teacher evaluation.

The Impact of Evaluation on Student Learning

If the avowed aim of evaluation or supervision is the improvement of instruction, then the evaluation of teachers should result in improved learning by students and with current high levels of interest in evaluation, one would expect to find many studies linking evaluation or supervision with student performance. However, Acheson and Gall (1980, p. 22) note that they were not able to find any recent research on student effects associated with clinical supervision, and searches of the ERIC, Dissertation Abstracts, and Psychological Abstracts indices by this researcher failed to reveal any studies more recent than those documented below.

Burton (1922, p. 8) cites "a pioneer study" carried out in 1919 in the Detroit Public Schools by Courtis and Barns which showed that the results in geography work, when measured with a standard test, were "markedly superior" in schools with a special supervisor, and that schools with ordinary supervision were superior to those having no supervision.

Barr et al. (1938, pp. 807-816) cite a number of controlled studies carried out in Detroit and rural Michigan in the 1920s. The studies showed dramatic differences in student achievement in supervised and unsupervised schools. One study showed that in thirteen school functions, the students in the supervised schools "advanced approximately 194 per cent as far during the seven months . . . as did the children with whom they were compared." Another study, carried out in rural Michigan, using a variety of standardized tests in reading, language, spelling, and mathematics compared the gains of pupils in supervised and unsupervised schools. During the study period, September 1924 to May 1925, pupils in supervised schools showed gains of 170.8 per cent of a normal year of school work whereas pupils in unsupervised schools showed gains of 97 per cent. Similar studies carried out in Indiana and Louisiana showed similar results.

Teacher Effectiveness

Tied to the whole process of teacher evaluation is the question of what is successful teaching. For several decades researchers (e.g., Barr, 1958; Biddle & Elena, 1964; Bishop, 1981; Gough, Durflinger, & Hill, 1968; Medley, 1979; Rosenshine & Berliner, 1978) have attempted to identify those characteristics of teachers that make them successful. Hersh (1981), in a comprehensive review of the literature, defines effectiveness as "student academic achievement as measured by nationally normed, standardized achievement tests" and goes on to delineate the characteristics of effective schools. He differentiates between two sets of conditions: Social Organization and Instruction and Curriculum. Under these broad headings he lists the attributes which pervade effective schools. In the Social Organization domain, effective schools have clear academic and social behavior goals, order and discipline, high expectations, public rewards and incentives, administrative leadership, community support, and a sense of pervasive caring and teacher efficacy. In the area of Instruction and Curriculum effective schools exhibit high academic learning time, frequent, monitored homework, frequent monitoring of student progress, a tightly coupled curriculum, a variety of teaching activities, and opportunities for student responsibility. Hersh indicates that while these factors individually have little impact on achievement as measured by standardized tests, together they create a "synergy of effect" wherein the whole is greater than the sum of the parts.

Berliner (1982) identifies similar factors as indicators of effective classroom instruction, namely: allocated time, engaged time, opportunity to learn, content coverage, curriculum/test congruence, and direct instruction. Medley and Crook (1982) list five tasks which distinguish more effective teachers from less effective teachers; they are: maintaining pupils' task involvement, teaching in large groups, minimizing disruptive behavior, managing small group activities, and supervising pupil seatwork.

The elements of effective teaching that result in increased achievement on standardized tests are not necessarily those that result in creativity, problem solving ability, and complex cognitive learning; and Centra and Potter (1980) comment:

> Higher order skills (e.g. inferential reasoning) are not particularly likely to be acquired (and certainly will not be demonstrated) by students whose teachers ask only lower order questions. (p. 285)

In addition, research by Horwitz, McKeachie and Kulik, Peterson, and Traub et al., cited by Darling-Hammond et al. (1984, p. 296), suggests that some of the desirable affective outcomes of education result from teaching behaviors that are different from those deemed useful in improving student scores on standardized tests.

While much of the recent research has focussed upon the teaching behaviors that are seen as effective for improving student performance on standardized tests, it can be seen that other teaching strategies leading to different outcomes may be deemed equally desirable, depending upon the educational goals. The question of educational goals is therefore critical to supervisory or evaluative processes. Once a set of educational goals has been established, then it is probable that the research on effective teaching can serve the purposes of teacher evaluation for, as Townsend

(1984) says, "Many of the typical measures of teacher effectiveness would appear to lend themselves to positive influence through the use of appropriate supervisory techniques" (p. 18).

Models of Teacher Evaluation

The earliest model of teacher evaluation was the inspectoral model which existed from the early 1700s until about fifty years ago (Burton & Brueckner, 1955). In the 1920s, the improvement of instruction emerged as the major objective of supervision and the period from 1920 was dominated by two models of supervision, the scientific model and the democratic model (Lucio & McNeil, 1962; Wiles & Lovell, 1967).

The last two decades have seen the emergence of several similar models, such as the Manatt and Redfern models, which involve the establishment of goals and some level of teacher involvement in the evaluative process. The Manatt "Mutual Benefit Evaluation" (Manatt, Palmer, & Hidlebaugh, 1976) involves the establishment of criteria; a diagnostic evaluation including preobservation conference, objective data gathering and a postobservation conference; the establishment of job targets; and a reevaluation.

Redfern (1980) developed a similar model based on the business model of "management by objectives." Like the Manatt model, the criteria are set by the responsible school authority, but in the Redfern model, the teacher and evaluator jointly determine the individual objectives and the measurement process to be used.

The flexible, multigoal model which has achieved prominence today is the Clinical Supervision model developed by Goldhammer (1969) and Cogan (1973).

As clinical supervision has evolved from its beginnings, so a variety of definitions have evolved; however, Morris Cogan's (1973) definition captures the essence of the concept:

> [Clinical supervision is] the rationale and practice designed to improve the teacher's classroom performance. It takes its principal data from the events of the classroom. The analysis of these data and the relationship between teacher and supervisor form the basis of the program, procedures, and strategies designed to improve the student's learning by improving the teacher's classroom behavior. (p. 27)

Goldhammer (1969) emphasizes the humanistic nature of the process:

> Given close observation, detailed observational data, face to face interaction between the supervisor and teacher, and an intensity of focus that binds the two together in an intimate professional relationship, the meaning of "clinical" is pretty well filled out. (p. 54)

Krajewski (1982), in discussing the conceptual framework of clinical supervision, identifies the following eight steps as Cogan's "cycle of supervision":

1. Establishing the teacher-supervisor relationship.
2. Planning with the teacher.
3. Planning the strategy of observation.

4. Observing instruction.
5. Analyzing the teaching-learning process.
6. Planning the strategy of the conference.
7. The conference.
8. Renewed planning.

Acheson and Gall (1980) in Techniques in the Clinical Supervision of Teachers: Preservice and Inservice Applications, have expanded upon the ideas presented by Cogan and Goldhammer and developed a model which is "interactive rather than directive, democratic rather than authoritarian, teacher centered rather than supervisor centered" (p. 8).

A model for a teacher evaluation system based upon the precepts of clinical supervision and the legal ramifications of improper supervisory practice has been developed by Acheson (1982) who states that an effective teacher evaluation program should:

1. Contain a set of standards of performance for teachers.
2. Include job descriptions for teachers.
3. Require that evaluators follows a cycle of pre-observation conferences, multiple observations, and post-observation conferences before a final evaluation is prepared.
4. Require that evaluators have training and skills in conducting classroom observations.
5. Require that teachers and evaluators cooperatively set performance goals.

6. Provide evidence of a monitoring or management system for the evaluators themselves.

7. Require that a program of assistance be made available for teachers who need help with serious problems.

Iftody's (1983) summary of Board of Reference hearings and the recent court cases in the United States (e.g., those reviewed by Zirkel and Cluckman, 1984) tend to support Acheson's model and emphasize the need for clearly defined parameters and the provision for affording teachers "all rights to natural justice and due process" (Alberta Teachers' Association, 1980, p. 3).

Teacher Evaluation in Alberta

While there are large number of articles related to teacher evaluation in the Alberta literature (e.g., Duncan, 1980; Keeler, 1980; Reavis, 1980; Stockman, 1982; Tymko, 1980), the researcher uncovered only a few research studies: Holdaway and Reikie (1977), Reikie (1977), Alberta Education (1980), Berg (1983), and Townsend (1984).

Holdaway and Reikie (1977) and Reikie (1977) carried out a study into the "Practices and policies involved in the formal evaluation of teachers in Alberta." The study, drawing its data from questionnaires completed by superintendents, focussed on:

1. The categories of teachers evaluated and the frequency of their evaluation.

2. The personnel involved in formally evaluating teachers.

3. The formalized procedures and criteria used in formally evaluating teachers.

4. The uses made of the evaluations.

5. The opinions of the respondents regarding contemplated changes in the existing practices.

Some of the major findings of the study were:

1. Tenured teachers were rarely, and sometimes never evaluated; probationary teachers were usually evaluated only once a year.

2. Superintendents were often extensively involved in performing teacher evaluations; however, they would prefer greater involvement from other personnel, particularly principals.

3. Standard evaluation forms were possessed by many systems but were not often used.

4. Appeal procedures were absent in many jurisdictions but where such procedures were in place they commonly included discussing the matter with the superintendent or evaluator and/or requesting a reevaluation.

5. The most frequently emphasized criteria were process or pressage criteria.

6. Formal evaluations were used most frequently as a basis for recommending permanent certification and awarding permanent contracts. They were also commonly used as the basis for dismissals, and less frequently, as a basis for promotion.

7. Most superintendents were not contemplating any changes in their formal evaluation practices. (adapted from Reikie, 1977, pp. iv, v)

The authors also noted that few systems had clearly structured evaluation policies and practices, that practices across the province were inconsistent, and that many jurisdictions had no teacher evaluation policy in place.

The Alberta Education (1980) study, entitled "Certificated Education Staff Evaluation," was essentially an abbreviated replication of the 1977 studies and its findings indicate that a number of changes occurred during the three intervening years. The most notable changes were:

1. Between 1977 and 1980 the use of formal evaluations for the purpose of improving teacher performance dramatically increased (18% in 1977 and 83% in 1980).
2. An increasing number of teachers, including first year teachers, experienced teachers new to the system, and tenured teachers, were being evaluated.
3. Beginning teachers were evaluated more frequently in 1980.
4. The number of jurisdictions reporting that they used a standardized form increased from 18% in 1977 to 52% in 1980. (adapted from Alberta Education, 1980, p. 17)

The Berg (1983) study was somewhat similar and questioned a sample of 30 Alberta superintendents on a number of items related to the policies and practices of their jurisdictions. The most notable findings were:

1. That an increased percentage of jurisdictions report that evaluation policies were in place (52% in 1980, 78% in 1983).
2. That about one half of respondents stated that their jurisdiction had written standards of performance, job descriptions, or programs of assistance.
3. Most jurisdictions used subjective criteria in their evaluation policies.
4. All of the superintendents surveyed reported that principals, or other school based staff were involved in formative evaluations. (adapted from Berg, 1983, p. 13)

The Townsend (1984) study was quite different from the preceding studies. It sought to "investigate, analyze, and document the process of implementation of a new policy of teacher supervision and evaluation in the five secondary schools of the Lethbridge School District No. 51" (p. i).

> A survey of teachers' and supervisors' perceptions of usual and ideal supervisory behavior was conducted at the beginning and end of the study period and other data were collected through the administration of questionnaires and frequent observations of classrooms and conferences.
>
> Analysis of the survey data showed that teachers and supervisors perceived a change in supervisory behavior towards what both groups considered as ideal supervisory behavior. Supervisors reported changed teacher behaviors especially in the areas of classroom management, planning, and increased attention to individual students.
>
> Overall the results of the study showed high levels of acceptance and participation, high levels of satisfaction with the process, and a need for more training and more involvement of district office personnel in the future. (adapted from Townsend, 1984, pp. i-iii)

Conclusion

This review of the literature illustrated the diverse and sometimes contradictory nature of the research on teacher evaluation and traced the development of evaluation from its beginnings as an autocratic, inspectoral process to the rather more humane, multigoal, democratic interactive process exemplified by Acheson's "state of the art" model.

The dearth of research on teacher evaluation in Alberta illustrates the need for more information on current practices, particularly with respect to the modern models based upon the clinical supervision process. The following chapters in this dissertation explore the demographics of teacher evaluation in Alberta, and examine current practices in evaluation with respect to improvement of instruction and due process criteria, namely, those processes common to the clinical supervision model.

CHAPTER III

DESIGN AND PROCEDURES

Introduction

To gather data on the state of formal evaluation in Alberta, this study involved a number of steps:

1. A three part questionnaire (Appendix A) was developed to collect data related to formal evaluation practices.
2. A study group consisting of Alberta school superintendents, other central office staff, and principals was selected.
3. The questionnaire was administered to the study group.
4. Minimum criteria in the areas of "due process" and "improvement of instruction" in teacher evaluation were established by submitting Section 3 of the questionnaire to experts for adjudication.
5. Teacher perceptions of appropriate evaluation strategies were assessed by administering Section 3 of the questionnaire to a sample of teachers.
6. Data received from these sources were processed as described later in this chapter.

Development of the Questionnaire

The initial draft of the questionnaire that provided the data base for the study was developed following a review of the literature and draws on the models used by Acheson (1980, 1981), Alberta Education (1980), Holdaway (1977), Reikie (1977), and Shinn (1976). These models were adapted on the basis of the researcher's experience in teacher evaluation in Alberta to form a compact questionnaire that focused specifically on the issues of this study.

The initial draft consisted of two sections. Section one drew heavily upon the Alberta Education (1980), Holdaway (1977), and Reikie (1977) models and was designed to collect demographic data and information on the intended purpose of the evaluation. Section two was based upon the models developed by Acheson (1980, 1981) and Shinn (1976).

The Acheson/Shinn model used 32 descriptive statements of classroom supervisory activities that request responses on a five point Likert scale ranging from "never" to "always." The items from this model were rephrased to a "first person" format; a number of questions were amalgamated and a few items, relating mainly to due process considerations, were added. The 27 items thus generated were formatted to elicit a yes/no response.

Seven people evaluated this draft: three experienced supervisors, a teacher, a professor of education, a researcher in teacher evaluation, and a lawyer whose expertise lies in the educational domain. These people were asked to judge the clarity of the descriptive statements and the appropriateness of the items for assessing teacher evaluation practices.

As a result of the input received, the initial draft was revised. The first section was expanded to include data on the initiating factors in the evaluation and its outcome, and the second section was increased to 37 items, of which 26 were adaptations of the Acheson/Shinn items.

The instrument was then piloted with ten principals from the Lakeland School District # 5460 in Alberta. The principals were asked to respond to the questionnaire and to critique it. On the basis of their responses a few minor wording modifications were made and the questionnaire was reformatted into a three section instrument. Section one collected demographic data about the responding evaluator. Section two addressed the "last formal teacher evaluation carried out" and collected data related to the initiating factors, purposes, and outcomes of the evaluation. Section three was the modified Acheson/Shinn instrument designed to acquire data on the supervisory activities used in "the last formal teacher evaluation you carried out."

The revised instrument was then piloted with nine superintendents from North Eastern Alberta. Superintendents were asked to respond to the questionnaire and to critique it. Based upon their input, no further changes were made to the instrument.

Appendix A contains the final draft of the questionnaire.

Identification of the Study Group

The Holdaway (1977) study showed that the personnel primarily involved in the formal evaluation of teachers are the superintendent, other central office staff, and the school principal; that in less than 10% of school jurisdictions are vice-principals "always or frequently" involved and that other categories of evaluator (teachers, Alberta Education consultants, etc.) were rarely, if ever, involved. A study by Berg (1983) indicates that in 1983, vice-principals were involved in 4% of evaluations requiring written reports (Berg, 1983, p. 8).

The populations surveyed in this study included school principals in public and separate schools in Alberta, the superintendents of Alberta school jurisdictions, and other central office staff who were members of the Conference of Alberta School Superintendents (C.A.S.S.) as of December 1983. Data on principals and superintendents were obtained from Alberta Education and data on other central office personnel were obtained from the Conference of Alberta School Superintendents.

Sampling

Superintendents

Alberta Education lists 147 school jurisdictions in the province. Of these, two lie in the City of Lloydminster, a community straddling the Alberta/Saskatchewan border. Lloydminster school jurisdictions are governed by the Saskatchewan Department of Education and were therefore excluded from the study. The remaining 145 Alberta school jurisdictions are served by 106 superintendents. Questionnaires were sent to all 106 Alberta superintendents.

Other Central Office Staff

Central office staff in Alberta school jurisdictions can be categorized into two groups:

1. Those staff members, who by virtue of their job description or contract, are full members of the Alberta Teachers' Association (A.T.A.) and are thus governed by the rules of the A.T.A.
2. Those staff members who, by virtue of their job description or contract are specifically excluded from full membership in the Alberta Teachers' Association (although they may be associate members). These staff members are eligible for membership in the Conference of Alberta School

Superintendents, and, "a very large percentage of those eligible are members" (C.A.S.S., 1984, p. 1).

Since the allegiances of the two groups tend to be different, and since the only centralized listing of central office staff other than the superintendent is the C.A.S.S. membership list, the researcher selected as the "other central office staff" population, those staff members whose names appeared on the December 1983 C.A.S.S. membership list.

120 "other central office" staff members were identified from the list; however, telephone contacts with non-respondents indicated that between December 1983 and May 1984, seven of that number had left the position, leaving a total population of 113. Questionnaires were sent to all 113 "other central office" staff.

Principals

A pilot of the questionnaire with ten principals in Northern Alberta yielded only a 60% return rate with no follow-up. It was therefore surmised than an attempt to survey the entire population would yield a relatively low return rate or require a prohibitively expensive series of follow-up procedures.

Since a low return rate would not permit generalization to the whole population, a random sampling procedure was used. This made mail and telephone follow-up procedures economically viable, resulted in a higher return rate and permitted generalization of the results to the population within the limits of sampling error.

A random sample of principals was drawn to provide a sufficiently large number of cases to allow for meaningful statistical analysis. The sample, consisting of 25% of the population, was provided by the Computer Services Branch of Alberta Education and included the names of 347 principals selected randomly by computer. Questionnaires were sent to all 347 principals.

Distribution of the Questionnaires

During the last week of April 1984, a package containing a questionnaire, a letter of introduction, and a self-addressed, reply-paid envelope was mailed to each of the administrators identified in the sample.

During the third week of May, a similar package containing a questionnaire, a reminder letter and a self-addressed, reply-paid enveloped was mailed to non-respondents.

Three weeks later, non-respondents were mailed a personalized reminder letter, together with a questionnaire and a self-addressed, reply-paid envelope.

During the last week of June, the remaining non-respondents were telephoned at their place of work and, where the person was available, s/he was asked to respond to the survey. Where the person was not available, a message was left requesting a response.

All participants were advised that individual responses would remain confidential and that the results of the study would be disseminated in the Fall.

Establishment of Minimum Criteria for Satisfactory Evaluation

One of the purposes of this study was "To analyze the completeness of teacher evaluation procedures used by evaluators in Alberta with respect to: (1) the improvement of instruction, and (b) due process requirements." To do this an instrument (hereafter called The Modified Acheson/Shinn Instrument) was developed and administered to five experts in the area of due process, to nine experts in the area of the improvement of instruction, and to 51 teachers who provided the teacher perspective on the instrument.

Development of the Instrument

Section three of the final draft of the questionnaire (Appendix A) was isolated and modified by replacing the yes/no response section with a four-point scale containing the descriptors: Essential (high priority), Desirable (moderate priority), Acceptable (low priority), and Unacceptable. The Modified Acheson/Shinn Instrument was mailed to those individuals identified as experts.

Identification of Experts

The Deans of Education of Alberta's Universities, Alberta Education, the Conference of Alberta School Superintendents, the Alberta School Trustees Association, and the Alberta Teachers' Association were asked to nominate "acknowledged experts" in the field of teacher evaluation. Responses were received from each of these agencies and experts were identified in the areas of "due process" and "improvement of instruction."

Due Process

The following people were identified as experts in the area of "due process in teacher evaluation":

Judy Anderson, B.A., LL.B., LL.M., Lawyer for the Alberta School Trustees Association.

Richard McNally, LL.B., Lawyer for the Alberta School Trustees Association.

Mary Jo Williams, Ph.D., Staff Officer for the Alberta Teachers' Association.

C. P. Clarke, LL.B., Lawyer for the Firm Field and Field, Barristers and Solicitors and legal counsel for the Alberta Teachers' Association.

M.B. Bielby, LL.B., Lawyer for the Firm Field and Field, Barristers and Solicitors and legal counsel for the

Alberta Teachers' Association.

During the first week of May 1984, a package containing a personal letter, the Modified Acheson/Shinn Instrument, and a reply-paid, self-addressed envelope was mailed to each of the persons identified as experts. The experts were asked to review the instrument and to rate the items in terms of their importance in assuring "due process" in teacher evaluation. Responses were received from all of the experts listed above and no follow-up procedures were required.

Improvement of Instruction

The following people were identified as experts in the domain of "teacher evaluation for the improvement of instruction":

Dr. David Townsend, Researcher, Lethbridge School District #51.

Dr. Alex Proudfoot, Department of Teacher Education and Supervision, University of Calgary.

Dr. Eugene Ratsoy, Department of Educational Administration, University of Alberta.

Myrna L. Greene, Coordinator, Education Research Centre, University of Lethbridge.

Dr. Laurie Mireau, Instructional Processes Consultant, Edmonton Public School Board.

Dr. Leroy Sloan, Assistant Superintendent, Educational Services, County of Parkland.

Dr. W. Unruh, Professor, Department of Teacher Education and Supervision, University of Calgary.

Dr. A. Boberg, Assistant Professor, Department of Educational Policy and Administration Studies, University of Calgary.

Dr. R. Heyman, Professor, Department of Educational Policy and Administration Studies, University of Calgary.

During the first week of May 1984, a package containing a personal letter, The Modified Acheson/Shinn Instrument, and a reply-paid, self-addressed envelope was mailed to each of the persons identified as experts. The experts were asked to review the instrument and to rate the items in terms of their importance to "evaluation for the improvement of instruction." Responses were received from all of the experts listed above.

Teachers' Perceptions of Evaluation Procedures

At the request of the Planning Services Branch of Alberta Education, a small, random sample of teachers was surveyed to assess their reaction to the questions asked in The Modified Acheson/Shinn Instrument. The sample was provided by the Computer Services Branch of Alberta Education and included the names of 51 teachers selected randomly from all teachers in school jurisdictions in Alberta.

During the third week of May 1984, a package containing The Modified Acheson/Shinn Instrument, a covering letter and a reply-paid, self-addressed envelope was mailed to each teacher identified in the sample.

A follow-up package was mailed to non-respondents three weeks later, and during the last week of June, the remaining non-respondents were telephoned at their place of work and, where the person was available, s/he was asked to respond to the survey. Where the person was not available, a message was left requesting a response.

Data Processing

Data from the questionnaires were entered onto keypunch cards and verified. The keypunch cards were processed in the University of Alberta computer and the data transferred to disk. Using the SPSSX Sprint package, frequency distributions and means were generated for all variables and the initial printout was examined for apparent anomalies. The single anomaly discovered was compared with the original data and corrected.

The expert ratings in the areas of due process and improvement of instruction, and the teacher ratings on the Acheson/Shinn Instrument were summed and averaged. Using the criterion that the subset of items with a mean score of 1.75 or less constituted the minimum criteria for satisfactory evaluation, three subsets of the original 37 items were generated:

1. The due process subset consisting of items 2, 10, 11, 12, 20, 21, 22, 23, 24, 25, 26, 31, 32, 33, 34, 35, and 36.
2. The improvement of instruction subset consisting of items 2, 3, 4, 5, 10, 11, 12, 13, 20, 21, 22, and items 24 through 37 inclusive.
3. The teacher preference subset consisting of items 3, 4, 5, 20, 25, 26, 27, 28, and items 30 through 37 inclusive.

Data relating to these subsets were entered into the computer.

Cross tabulation tables were generated to compare the responses of superintendents, other central office staff, and principals on the several of the items in sections 1 and 2 of the questionnaire and of each of the items in section 3.

Three by three analysis of variance was carried out to test for significant differences in the scores on Section 3 of the questionnaire by category of evaluator (superintendent, other central office, or principal) and category of teacher evaluated (first year, experienced but new to the system, tenured). Two way analysis of variance was carried out to test for significant differences in the scores on Section 3 of the questionnaire with respect to the responses on Section 2, questions 6 through 10. Two way analysis of variance was used to test the significance of the response to individual items on Section 3 of the questionnaire with respect to the sum of the other items in the same section.

The Pearson Product Moment correlation was used to test the significance of the relationship between the scores on Section 3 and demographic variables.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This chapter presents the findings of the study as derived from the instruments used to gather the data.

The results are presented in six sections:

1. Demographic factors relating to all respondents.
2. The demographics, initiating factors, intended purposes, and outcomes of the "last formal teacher evaluation carried out" by the respondents.
3. The evaluation strategies used in the "last formal teacher evaluation carried out" by the respondents.
4. The establishment of minimum criteria for satisfactory evaluation.
5. The relationship between actual practice and the minimum criteria for satisfactory evaluation.
6. The relationships between demographic factors and the score on the Modified Acheson/Shinn Instrument.

Demographic Data

Response Rate

Five hundred and sixty six questionnaires were sent to superintendents, other central office staff, and principals, and a total of 484 usable responses were received, resulting in an 85.5% return rate for the study group.

Of the 106 superintendents surveyed, 99 (93.4%) returned usable responses, two (1.9%) wrote letters indicating their reluctance to participate in the research, and one (0.9%) returned a blank questionnaire.

Other central office staff returned 97 (85.8%) of the 116 questionnaires sent out and one (0.9%) letter was received declining to participate in the study.

Principals responded by returning 288 (83.3%) of the 347 questionnaires mailed out. One (0.3%) letter was received declining participation.

Demographic Factors

Table 1 illustrates the extent of the respondents' experience in teacher evaluation. Superintendents ranged in experience from zero to 31 years, other central office staff from zero to 37 years, and principals from zero to 30 years. As might be expected, superintendents have, on average, more experience than other central office staff, who in turn, are more experienced than principals. Of note is the relatively high proportion (19.2%) of superintendents with twenty or more years experience. The possible ramifications of this are discussed later in the chapter.

Table 2 shows the number of university credit courses in teacher evaluation completed by the respondents. A

TABLE 1. Years of Experience as a Teacher Evaluator

Years of Experience	Superintendents N = 99	Other Central Office Staff N = 97	Principals N = 288
0	2.0%	3.1%	8.0%
1 - 5	12.1%	13.6%	25.7%
6 - 10	19.2%	38.6%	31.3%
11 - 15	35.4%	29.2%	17.0%
16 - 20	12.1%	8.3%	11.1%
Over 20	19.2%	7.2%	6.9%
Mean	13.8 years	11.4 years	9.3 years

TABLE 2. Number of University Credit Courses in the Evaluation of Teachers Completed by the Respondents

Number of Courses*	Superintendents N = 99	Other Central Office Staff N = 97	Principals N = 288
0	28.3%	28.9%	46.5%
1	18.2%	15.5%	27.1%
2	23.2%	24.7%	14.6%
3	12.1%	15.5%	7.6%
4	11.1%	12.4%	2.4%
5 or more	7.1%	3.0%	1.7%
Mean number of courses	1.86	1.76	1.00

*A University credit course means a six credit course from an Alberta university or six semester hours or nine term hours of coursework from U.S. universities.

course was defined as a full course from an Alberta university or six semester hours or nine term hours of coursework from a United States university. Superintendents and other central office staff reported a range of zero to six courses, and principals reported a range from zero to nine courses. Again, as might be expected, superintendents had, on average, more university training than other central office staff, who had more training than principals.

Over one quarter of the superintendents and other central office staff, and almost half of the principals responding to the survey indicate that they had no university training in the evaluation of teachers.

Table 3 presents the data on the time spent by respondents on inservice training in teacher evaluation during the last five years.

Responses from superintendents showed a range of in service time from zero to 1000 hours, with 98 of the 99 responses falling in the range from zero to 120 hours. A telephone conversation with the superintendent with the 1000 hour response revealed that teacher evaluation had been his particular area of study for the past few years and that the 1000 hours (. . . "a conservative estimate") included reading and research, and the giving and receiving of in service training. Because this response comprised over one third of the total time spent by all superintendents on in service training in teacher evaluation, and was so atypical,

TABLE 3. Hours of In Service Training in Teacher Evaluation Undertaken by Members of the Study Group During the Past Five Years

Hours of In Service Training	Superintendents N = 98	Other Central Office Staff N = 97	Principals N = 288
0	26.5%	26.8%	26.7%
1 - 6	17.3%	9.3%	20.8%
7 - 12	18.4%	14.4%	18.8%
13 - 18	3.1%	5.2%	6.3%
19 - 24	5.1%	18.6%	10.4%
25 - 30	13.3%	5.2%	6.9%
31 - 36	1.0%	2.1%	0.3%
37 - 42	3.1%	1.0%	1.4%
43 - 48	3.1%	1.0%	1.0%
48 - 54	2.0%	3.1%	2.8%
55 or more	7.1%	13.3%	4.5%
Mean number of hours of In Service	18.5	23.4	14.9

Table 3 does not include the data from this respondent.

Other central office staff reported a range of in service training time from zero to 120 hours and principals reported a range of zero to 200 hours.

The median for superintendents was 9.8 hours, for other central office staff, 10.5 hours, and for principals, 7.1 hours. More than a quarter of the respondents in each group reported that they had undertaken no in service training during the last five years.

Data presented later in the chapter will show that other central office staff evaluate more teachers (on a per capita basis) than do superintendents, who in turn evaluate more teachers than do principals. This pattern is reflected in the time spent on in service training.

The study group perception of the existence of a district teacher evaluation policy is reported in Table 4.

Previous studies in Alberta, which reported the data on the presence of policies by jurisdiction indicated that in 1980, 52% of the jurisdictions had a teacher evaluation policy in place (Alberta Education, 1980), and in 1983 a policy was in place in 78% of the jurisdictions (Berg, 1983). By comparison, 80.8% of respondents in this study indicated the presence of a policy in their jurisdiction.

In light of the recent Alberta Education (1984) regulation requiring that school boards have a written policy in place, it is of interest that 14.5% of respondents

TABLE 4. Study Group Perception of the Existence of a District Teacher Evaluation Policy

Policy in Place	Percentage of Respondents N = 484
Yes	80.8%
No	14.5%
Unsure	3.7%
No Response	1.0%

indicated that their jurisdiction had no written policy on teacher evaluation.

Table 5 reports the study group's assessment of the adequacy of the time they have available for teacher evaluation. The data show that very few of the respondents considered the time available totally adequate and more than 50% of the 473 respondents considered that the time available was inadequate or totally inadequate.

More other central office staff indicated that the evaluation time available to them was adequate (30.5%) than superintendents (14.6%) or principals (20.6%). This may well be because they evaluate more teachers (on a per capita basis) than superintendents or principals, and teacher evaluation is generally an integral part of the job description.

When asked to rate the priority of teacher evaluation in relation to all of their duties, over half of the other central office staff and the principals, and almost three quarters of the superintendents, indicated (Table 6) that teacher evaluation was a high or very high priority item. Of respondents who carried out teacher evaluations during the year, 89% rated teacher evaluation as a high or very high priority.

The general perception among a majority of respondents is that teacher evaluation is a high priority item, but that they have a less than an adequate amount of time to carry out this function.

TABLE 5. Study Group Assessment of the Adequacy of the Time Available for Teacher Evaluation

Time Available	Superintendents N = 96	Other Central Office Staff N = 92	Principals N = 285
Totally Adequate 1	3.1%	9.8%	6.3%
2	11.5%	20.7%	14.4%
3	29.2%	25.0%	25.6%
4	38.5%	28.3%	35.1%
Totally Inadequate 5	17.7%	16.3%	18.6%

TABLE 6. Study Group Perception of the Priority of Teacher Evaluation

Priority	Superintendents N = 96	Other Central Office Staff N = 92	Principals N = 285
Very High 1	25.8%	16.1%	15.8%
2	47.4%	40.9%	37.2%
3	15.5%	23.7%	28.8%
4	5.2%	8.6%	10.5%
Very Low 5	6.2%	10.8%	7.7%

Evaluations Performed

During the study period, respondents reported that a total of 4,924 teachers were evaluated. Of these, 1454 (29.5%) were evaluated by superintendents, 1631 (33.1%) by other central office staff, and 1839 (37.3%) by principals.

Not all respondents were involved in teacher evaluations during the study period but 71.7% of superintendents, 67% of other central office staff and 73.3% of principals reported that they had evaluated one or more teachers. Of the respondents who did evaluate teachers, superintendents averaged 20.8 teachers, other central office staff, 25.1 teachers, and principals, 8.7 teachers.

The Last Formal Teacher Evaluation Carried Out

Demographic Data

Table 7 illustrates the patterns of formal teacher evaluation during the study period and during the last formal teacher evaluation carried out by respondents. (N.B. A formal evaluation may consist of a series of conferences and observations leading to a single written report.) The patterns are somewhat similar but respondents show a higher percentage of evaluations of new teachers in the category of "last formal evaluation." Since the questionnaires were administered in May, the last month for making decisions of tenure versus termination on new teachers, it is probable

TABLE 7. Patterns of Teacher Evaluation During the Study Period

	First Year Teachers	Experienced Teachers New to School/System	Tenured Teachers
Teachers Evaluated During Survey Period N = 4924	21.9%	17.3%	60.8%
Teachers Evaluated During "Last Formal Evaluation" N = 342	30.1%	18.1%	51.8%

that respondents were placing a higher priority on the evaluation of first year teachers during this period.

Table 8 shows the distribution of classroom observations among grade levels for the last formal evaluation. A total 347 teachers were formally evaluated and many of these were observed on several occasions, and at different grade levels; thus, the number of reported observations exceeds 347.

The largest single group of teachers evaluated (31.4%) were those teaching at the junior high school level.

Table 9 indicates the distribution of observations among subject categories for the last formal evaluation. A total 347 teachers were formally evaluated and many of these were observed on several occasions, and in different subject areas; thus, the number of reported observations exceeds 347.

Almost one third of the observations carried out were in language arts classes, and just under a quarter were in math. Social studies and all the sciences accounted for another quarter of the observations, and the remaining 20% were categorized as "other."

Physical education, French, art, and music predominated among the responses in the "other" category, but the study group reported a wide range of subjects observed including: industrial education, religion, remedial education, drama, family life education, home economics, business education,

TABLE 8. Distribution of Observations Among Grade Levels

Grade Level	Percentage of Reported Observations N = 477
ECS	2.5%
1 - 3	24.1%
4 - 6	23.1%
7 - 9	31.4%
10 - 12	14.7%
Spec. Ed.	4.2%
Total	100.0%

TABLE 9. Distribution of Observations Among Subject Categories

Subject Observed	Percentage of Reported Observations N = 606
Language Arts	31.4%
Math	22.4%
Social	16.7%
Sciences	9.4%
Other	20.1%
Total	100.0%

vocational education, living skills, guidance, crafts, health, beauty culture, law, computer education, and Ukrainian.

Table 10 reports the number of separate classroom visits made by respondents during the last formal teacher evaluation. Superintendents reported a range of one to seven visits with a mean of 2.2 visits, other central office staff ranged from one to nine visits and averaged 2.7 visits, and principals ranged from one to nine visits and averaged 3.4 visits. Over 80% of the respondents indicated that they had made two or more visits, and over half made three or more visits during the last formal teacher evaluation.

The time spent in actual classroom observation during the last formal teacher evaluation is shown on Table 11. The total observation time reported by the respondents ranged from ten minutes to fifteen hours. The mean number of minutes spent in observation was 163.9; the median was 116.8 minutes.

Table 12 reports the study group perception of the degree of adherence to school board policy during the last formal teacher evaluation. Of the 347 members of the study group who evaluated teachers, 11.2% made no response to this item. This may very well have been because they perceived that their district had no policy. Of those who responded, superintendents showed the greatest rate (44.1%) and principals the least rate (29.0%) of following policy strictly to the letter.

TABLE 10. Number of Classroom Visits Made During the Last Formal Teacher Evaluation

Number of Visits	Superintendents N = 68	Other Central Office Staff N = 62	Principals N = 197
1	26.5%	14.5%	10.7%
2	44.1%	38.7%	22.8%
3	17.6%	27.4%	26.4%
4	7.4%	9.7%	18.3%
5	0%	4.8%	10.2%
6 or more	4.4%	4.8%	11.6%
Mean	2.2 visits	2.7 visits	3.4 visits

TABLE 11. Number of Minutes Spent in Classroom Observation During the Last Formal Teacher Evaluation

Minutes Spent in Observation	Percentage of Respondents N = 347
0 - 60	17.3%
61 - 120	35.4%
120 - 180	19.6%
180 - 240	13.8%
240 - 300	3.7%
Over 300	7.5%
No Response	2.7%

Mean number of minutes per formal evaluation: 163.9

TABLE 12. Study Group Perception of Their Degree of Adherence to School Board Policy During the Last Formal Teacher Evaluation

Degree of Adherence to Board Policy	Superintendents N = 59	Other Central Office Staff N = 63	Principals N = 186
Strictly to the letter 1	44.1%	41.3%	29.0%
2	44.1%	52.4%	49.5%
3	6.8%	4.7%	16.1%
4	5.0%	1.6%	3.8%
Not at all 5	0%	0%	1.6%

Table 13 reports the respondents' rating of the performance of the last teacher formally evaluated. Although almost two thirds of all respondents rated the teachers in categories one and two, principals rated more teachers in these categories than did other central office staff or superintendents. Superintendents and other central office staff reported a much higher proportion of teachers whose performance was rated as not satisfactory.

Since it is commonly the task of the superintendent or other central office staff (rather than the principal) to make the final decision on the tenure or contract status of a teacher, it seems reasonable that they would place greater emphasis on the formal evaluation of unsatisfactory teachers than would principals. One might also speculate that, in the interests of maintaining harmony and a collegial relationship with staff, principals might avoid the onerous, and often contentious, task of formally evaluating those teachers whose performance they perceived as unsatisfactory.

Table 14 shows the primary intended purposes of the last formal teacher evaluation carried out by the respondents. Some respondents indicated more than one primary purpose for the evaluation so the number of responses (424) exceeds the number of formal evaluations reported (347). Other central office staff and principals most frequently cited improving the performance of the teacher as the primary purpose, whereas superintendents

TABLE 13. Respondents' Rating of the Performance of the Last Teacher Formally Evaluated

Rating	Superintendents N = 69	Other Central Office Staff N = 65	Principals N = 204
Excellent 1	18.8%	13.8%	32.8%
2	33.3%	52.3%	38.7%
3	23.2%	20.0%	22.1%
4	13.0%	4.6%	5.9%
Not Satisfactory 5	11.5%	9.2%	0.5%

TABLE 14. Primary Intended Purpose of the Last Formal Evaluation

Primary Intended Purpose	Percentage of Responses S N = (88)	O (77)	P * (259)
Improving performance of teacher	19.3%	31.2%	29.3%
Awarding a permanent contract	26.1%	28.6%	12.7%
Basis for retention in position	19.3%	13.0%	13.9%
Recommending permanent certification	14.8%	7.8%	10.4%
Determining inservice needs	5.7%	5.2%	7.7%
Basis for dismissal	5.7%	7.8%	2.3%
Basis for transfer	1.1%	0%	3.5%
Recording the performance of a resigning/retiring teacher	1.1%	1.3%	1.9%
Basis for promotion	1.1%	1.3%	1.2%
Other	5.7%	5.2%	17.0%

* S = Superintendents
O = Other Central Office Staff
P = Principals

ranked this function second to the awarding of a permanent contract. The dismissal of teachers was a primary purpose for the last evaluation for 4.1% of all respondents; however, it was more often the primary purpose with other central office staff (7.8%) than with superintendents (5.7%) or principals (2.3%).

In the "other" category, the majority of responses indicated that the primary purpose of the evaluation was to comply with a board policy; however, a few respondents indicated that their primary purpose was to provide documentation for the Edwin Parr Teacher of the Year Award, an award presented annually by the Alberta School Trustees Association.

Table 15 reports the factors involved in initiating the evaluation. Some respondents indicated more than one initiating factor for the evaluation so the total number of responses (386) exceeds the number of formal evaluations reported (347).

Almost two thirds of the responses indicated that the evaluation was a routine evaluation as required by school board policy. The responses were similar across all three evaluator categories although superintendents showed a slightly greater emphasis on the need for documentation. Only 11.5% of the respondents indicated that the evaluation was initiated in response to evaluator concern or parent complaints.

TABLE 15. Primary Condition Involved in Initiating the Last Formal Teacher Evaluation

Initiating Factor	Percentage of Responses		
	S	O	P *
N =	(82)	(73)	(231)
District policy: Routine evaluation	57.3%	60.3%	66.7%
Need for documentation	17.1%	13.7%	11.7%
Teacher request	9.8%	9.6%	5.6%
Concerns after informal observations	7.3%	5.5%	6.5%
Parental complaint	3.7%	6.8%	5.2%
Other	4.9%	4.1%	4.3%

* S = Superintendents
O = Other Central Office Staff
P = Principals

"Other" initiating factors included variations on the need for documentation, and the Edwin Parr Award.

Table 16 reports the outcome of the last formal teacher evaluation. Some respondents indicated more than one outcome for the evaluation so the total number of responses (432) exceed the number of formal evaluations reported (347). The most frequently reported outcome by all evaluator categories was that the teacher would continue in his or her present position. The awarding of a permanent contract, recommendation for permanent certification, and the development of an in service training plan were other commonly cited responses. Only three teachers (0.7% of all responses) challenged the evaluation report.

Teacher dismissal was reported as the outcome in 4.8% of all responses, but as might be expected, evaluations conducted by superintendents resulted in a higher dismissal rate (9.0%) than those conducted by other central office staff (4.6%) or principals (3.5%). Responses in the "other" category included the filing of reports in the teacher's personal file and recommendation for the Edwin Parr Award.

In summary, the majority of the last formal teacher evaluations carried out by the study group were initiated as routine evaluations according to school board policy; their primary purposes were: improving the performance of the teacher, awarding a permanent contract, providing a basis for retention in position, and recommending for

TABLE 16. Outcome of the Last Formal Teacher Evaluation

Outcome of the Evaluation The teacher was/will:		Percentage of Responses S (87)	 O (87)	 P * (258)
	N =			
continue in present position		35.6%	36.7%	45.7%
receive a permanent contract		20.7%	20.7%	11.2%
be recommended for permanent certification		14.9%	8.0%	12.4%
assisted with an inservice plan		4.6%	14.9%	10.1%
dismissed		9.0%	4.6%	3.5%
seen by another evaluator		4.6%	4.6%	4.7%
promoted		0%	3.4%	1.6%
challenge the evaluation report		0%	1.1%	0.8%
Other		10.3%	5.7%	10.1%

* S = Superintendents
  O = Other Central Office Staff
  P = Principals

permanent certification. As a result of the evaluation, most teachers were retained in their present position, received a permanent contract or were recommended for permanent certification.

Establishment of Minimum Criteria for Satisfactory Evaluation

Due Process Criteria

Copies of the modified Acheson/Shinn instrument were sent to the five people identified as experts in the area of due process in teacher evaluation. The experts were asked to rate each item as (1) Essential, (2) Desirable, (3) Acceptable, or (4) Not Acceptable.

Three of the experts returned usable responses, another replied with a letter declining to respond, and the other addressed the items in more general terms.

The instrument was scored with items rated as essential receiving one point; desirable, two points; acceptable, three points; and not acceptable, four points. Table 17 shows the ranked mean scores of the ratings.

Items receiving a mean score between 1.00 and 1.75 were rated as essential to assuring due process in formal teacher evaluation. Those items were:

> Item 2. Standards of performance had been developed for the teacher (score 1.66).
>
> Item 10. I recorded data on the teacher's questions for later analysis (score 1.66).

TABLE 17. Experts' Ratings of Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	I	P	T*
25	Met with teacher after observation	1.00	1.00	1.16
20	Observed for at least 30 minutes	1.00	1.00	1.43
35	Teacher received a copy of report	1.13	1.33	1.10
32	Developed recommendations	1.50	1.00	1.39
34	Developed a plan of assistance	1.50	1.00	1.47
36	Teacher could respond in writing	1.13	1.66	1.32
33	Developed recommendations with teacher	1.25	1.66	1.23
37	Appeal procedure available	1.00	2.00	1.23
26	Solicited teacher analysis of data	1.50	1.66	1.29
31	Recommended resources	1.50	1.66	1.45
30	Gave praise and encouragement	1.25	2.33	1.32
27	Encouraged teacher inferences & opinions	1.38	2.33	1.19
28	Encouraged consideration of alternatives	1.29	2.00	1.71
22	Compared with Alberta Program of Studies	1.75	1.33	2.03
24	Examined student work	1.63	1.66	1.87
2	Standards of performance developed	1.57	1.66	2.00
3	Met prior to observation	1.75	2.00	1.52
12	Recorded data on on-task behavior	1.75	1.66	2.00
10	Recorded data on teacher questions	1.75	1.66	2.03
21	Examined teacher's planbook	1.63	1.66	2.19
5	Found teacher concerns	1.38	2.66	1.52
1	Had written job description	1.80	2.00	1.76
11	Recorded data on student responses	1.75	1.66	2.30
4	Found teacher expectations of students	1.75	2.50	1.48
29	Listened more than I talked	1.43	2.66	1.87
23	Examined record of student achievement	2.13	1.66	2.19
13	Recorded data on patterns of response	1.75	2.00	2.38
7	Teacher chose observational strategies	1.88	3.00	1.77
8	Recorded impressions about classroom	2.25	2.33	2.20
19	Recorded student/teacher interactions	1.88	2.66	2.33
16	Recorded data on student movement	2.50	2.33	2.53
9	Made notes of classroom dialogue	2.50	2.33	2.53
15	Recorded data on teacher movement	2.35	2.66	2.50
6	Suggested observational techniques	2.17	3.00	2.00
18	Recorded data on specific student	3.00	2.66	2.93
17	Made video recordings	2.69	3.33	3.14
14	Made audio recordings	2.88	3.33	2.97

*I = Mean score of ratings by experts in improvement of instruction; P = Mean score of ratings by experts in due process; T = Mean score of teacher ratings

Items rated as "essential" have a mean score between 1.00 and 1.75

Item 11. I recorded data on students' responses to the teacher's questions (score 1.66).

Item 12. I recorded data on student on task behavior (score 1.66).

Item 20. I remained in the classroom for at least 30 minutes when I visited (score 1.00).

Item 21. I examined the teacher's planbook (score 1.66).

Item 22. I specifically checked that the program was in accord with the Alberta Program of Studies (score 1.33).

Item 23. I examined the record of student achievement (score 1.66).

Item 24. I examined student work (score 1.66).

Item 25. I met with the teacher after the observations (score 1.00).

Item 26. I solicited the teacher's analysis of the data (score 1.66).

Item 31. I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve (score 1.66).

Item 32. I developed recommendations to assist the teacher improve instruction (score 1.00).

Item 33. I developed recommendations in cooperation with the teacher (score 1.66).

Item 34. I developed a plan of assistance for the teacher as an outcome of the evaluation (score 1.00).

Item 35. I gave the teacher a copy of the evaluation report (score 1.33).

Item 36. The teacher was given the opportunity to respond in writing to the report (score 1.66).

In essence, the items related to due process suggest that:

1. Standards of performance must be developed for the teacher.
2. A variety of objective data must be collected.
3. A post conference must be held with the teacher to discuss the data and develop recommendations for improvement.
4. A plan of assistance must be developed for the teacher.
5. The teacher must be given a copy of the evaluation report and have the opportunity to respond in writing.

Improvement of Instruction Criteria

Copies of the modified Acheson/Shinn instrument were sent to the nine people identified as experts in the area of the improvement of instruction in formal teacher evaluation. The experts were asked to rate each item as (1) Essential, (2) Desirable, (3) Acceptable, or (4) Not Acceptable.

All of the experts returned usable responses; however, one reply was received too late to be included in the data processing.

The instrument was scored with items rated as essential receiving one point; desirable, two points; acceptable, three points; and not acceptable, four points. Table 17 shows the ranked mean scores of the ratings.

Items receiving a mean score between 1.00 and 1.75 were rated as essential to the improvement of instruction in formal teacher evaluation. Those items were:

Item 2. Standards of performance had been developed for the teacher (score 1.57).

Item 3. I met with the teacher prior to the observation (score 1.75).

Item 4. I found out what the teacher expected the students to be doing during the visit (score 1.75).

Item 5. I found out what concerns or problems the teacher had (score 1.38).

Item 10. I recorded data on the teacher's questions for later analysis (score 1.75).

Item 11. I recorded data on students' responses to the teacher's questions (score 1.75).

Item 12. I recorded data on student on task behavior (score 1.75).

Item 20. I remained in the classroom for at least 30 minutes when I visited (score 1.00).

Item 21. I examined the teacher's planbook (score 1.63).

Item 22. I specifically checked that the program was in accord with the Alberta Program of Studies (score 1.75).

Item 24. I examined student work (score 1.63).

Item 25. I met with the teacher after the observations (score 1.00).

Item 26. I solicited the teacher's analysis of the data (score 1.50).

Item 27. I encouraged the teacher to make inferences and to express feelings and opinions about the observational data (score 1.38).

Item 28. I encouraged the teacher to consider alternative teaching techniques and explanations of classroom events (score 1.29).

Item 29. I listened more than I talked during the post observation conference (score 1.43).

Item 30. I gave praise and encouragement for specific growth in the teacher's teaching skills (score 1.25).

Item 31. I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve (score 1.50).

Item 32. I developed recommendations to assist the teacher improve instruction (score 1.50).

Item 33. I developed recommendations in cooperation with the teacher (score 1.25).

Item 34. I developed a plan of assistance for the teacher as an outcome of the evaluation (score 1.50).

Item 35. I gave the teacher a copy of the evaluation (score 1.13).

Item 36. The teacher was given the opportunity to respond in writing to the report (score 1.13).

Item 37. The teacher had recourse to a formal appeal procedure if he/she challenged the report (score 1.00).

The 25 items identified as essential to the improvement of instruction generally overlap the items required to meet due process requirements, the major difference being the rather more teacher-centered nature of the improvement of instruction subset. In essence, to meet the minimum criteria for the improvement of instruction, the minimum criteria to assure due process must be met (with the exception of Item 23, the examination of the record of student achievement) and:

1. A preconference must be held to discover what the teacher expected the students to be doing, and to discern what problems or concerns the teacher had.

2. During the post conference, greater teacher input must be sought and appropriate praise and encouragement given.
3. A formal appeal procedure should be available if the teacher challenged the report.

Teacher Perceptions

Copies of the modified Acheson/Shinn instrument were sent to 51 teachers to determine teacher perceptions of the essential processes of formal teacher evaluation. The teachers were asked to rate each item as (1) Essential, (2) Desirable, (3) Acceptable, or (4) Not Acceptable.

Thirty two of the teachers (62.7%) returned usable responses.

The instrument was scored with items rated as essential receiving one point; desirable, two points; acceptable, three points; and not acceptable, four points. Table 17 shows the ranked mean scores of the ratings.

Items receiving a mean score between 1.00 and 1.75 were rated as essential in formal teacher evaluation. Those items were:

Item 3. I met with the teacher prior to the observation (score 1.52).

Item 4. I found out what the teacher expected the students to be doing during the visit (score 1.48).

Item 5. I found out what concerns or problems the teacher had (score 1.52).

Item 20. I remained in the classroom for at least 30 minutes when I visited (score 1.43).

Item 25. I met with the teacher after the observations (score 1.16).

Item 26. I solicited the teacher's analysis of the data (score 1.29).

Item 27. I encouraged the teacher to make inferences and to express feelings and opinions about the observational data (score 1.19).

Item 28. I encouraged the teacher to consider alternative teaching techniques and explanations of classroom events (score 1.71).

Item 30. I gave praise and encouragement for specific growth in the teacher's teaching skills (score 1.32).

Item 31. I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve (score 1.45).

Item 32. I developed recommendations to assist the teacher improve instruction (score 1.39).

Item 33. I developed recommendations in cooperation with the teacher (score 1.23).

Item 34. I developed a plan of assistance for the teacher as an outcome of the evaluation (score 1.47).

Item 35. I gave the teacher a copy of the evaluation report (score 1.10).

Item 36. The teacher was given the opportunity to respond in writing to the report (score 1.32).

Item 37. The teacher had recourse to a formal appeal procedure if he/she challenged the report (score 1.32).

The sixteen items identified by teachers as essential form a subset of the improvement of instruction items. The most notable differences, however, fall in the areas related to the establishment of standards and the collection of objective data. Teachers rate all of these items lower than either of the groups of experts, and NO objective data collection strategies were rated as essential by teachers. In addition, teachers rated the teacher input items (items 4, 5, 27, and 28) higher than the other groups.

This pattern of responses by teachers suggests to the researcher that teachers are anxious about the purposes of formal teacher evaluation, and, notwithstanding the data presented earlier, perceive the process as punitive. Thus, they tend to rate those items related to the establishment of standards and the collection of objective data (essential components of any dismissal process) lower than the experts.

Actual Evaluative Practices Used by the Study Group

Section three of the questionnaire was the Modified Acheson/Shinn Instrument designed to acquire data on the supervisory activities used in the last formal teacher evaluation. Respondents were asked to respond "Yes" or "No" to the items.

To ensure that the instrument was, in fact, a scale with no anomalous items, each item was examined with respect to the total score and an analysis of variance was carried out to compare the difference between "yes" and "no" responses. For all items, the mean score achieved by "yes" respondents was higher than that achieved by "no" respondents and, with the exception of items 14 and 17, the difference was significant well beyond the .01 level. Items

14 and 17 had so few "yes" (six to item 14, one to item 17) responses that, although the mean for the "yes" response was greater than for the "no" response in both cases, the difference was not statistically significant. It was therefore concluded that the instrument was a scale and that there were no anomalous items.

Table 18 reports, in rank order, the percentage of superintendents who responded "yes" to each of the items on the Modified Acheson/Shinn Instrument. Similarly, Table 19 reports the data on other central office staff responses, and Table 20, the principals' data. Table 21 reports the consolidated data for all respondents and Table 22 presents a comparative ranking of "yes" responses.

Noteworthy differences occurred on ten items:

For Item 3 (I met with the teacher prior to the observation), just less than half the superintendents, over three quarters of the other central office staff, and 86.7% of principals reported a "yes" response.

As might be expected, an appeal procedure (Item 37) was more readily available when the evaluation was carried out by a principal (91.5%) than by other central office staff (87.7%) or by the superintendent (69%).

Superintendents and other central office staff ranked higher than principals in recording student/teacher interactions (Item 19), recording impressions about the classroom (Item 8), the examination of students' work (Item

TABLE 18. Percentage of Superintendents Who Responded "Yes" to Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	Percentage of "Yes" Responses n = 71	Rank
25	Met with teacher after observation	98.6%	1
20	Observed for at least 30 minutes	95.8%	2
19	Recorded student/teacher interactions	94.4%	3
8	Recorded impressions about classroom	93.0%	5
24	Examined student work	93.0%	5
35	Teacher received a copy of report	93.0%	5
21	Examined teacher's planbooks	91.5%	7
5	Found teacher concerns	90.1%	8
23	Examined record of student achievement	84.5%	10
30	Gave praise and encouragement	84.5%	10
32	Developed recommendations	84.5%	10
12	Recorded data on on-task behavior	81.7%	12
4	Found teacher expectations of students	78.9%	13
27	Encouraged teacher inferences & opinions	77.5%	14.5
36	Teacher could respond in writing	77.5%	14.5
22	Compared with Alberta Program of Studies	76.1%	16
26	Solicited teacher analysis of data	70.4%	17.5
28	Encouraged consideration of alternatives	70.4%	17.5
37	Appeal procedure available	69.0%	19
11	Recorded data on student responses	60.6%	20
9	Made notes of classroom dialogue	59.2%	21.5
10	Recorded data on teacher questions	59.2%	21.5
13	Recorded data on patterns of response	56.3%	23
2	Standards of performance developed	54.9%	24
3	Met prior to observation	49.3%	25
18	Recorded data on specific student	47.9%	26
33	Developed recommendations with teacher	45.1%	27
15	Recorded data on teacher movement	43.7%	28
16	Recorded data on student movement	40.8%	29
1	Had written job description	35.2%	30.5
31	Recommended resources	35.2%	30.5
34	Developed a plan of assistance	32.4%	32
6	Suggested observational techniques	29.6%	33
29	Listened more than I talked	28.2%	34
7	Teacher chose observational strategies	22.5%	35
14	Made audio recordings	1.4%	36
17	Made video recordings	0%	37

TABLE 19. Percentage of Other Central Office Staff Who Responded "Yes" to Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	Percentage of "Yes" Responses n = 65	Rank
20	Observed for at least 30 minutes	100 %	1.5
25	Met with teacher after observation	100 %	1.5
21	Examined teacher's planbook	95.4%	4.5
24	Examined student work	95.4%	4.5
8	Recorded impressions about classroom	95.4%	4.5
35	Teacher received a copy of report	95.4%	4.5
12	Recorded data on on-task behavior	93.8%	8
30	Gave praise and encouragement	92.3%	7
27	Encouraged teacher inferences & opinions	90.8%	9
5	Found teacher concerns	89.2%	10.5
19	Recorded student/teacher interactions	89.2%	10.5
37	Appeal procedure available	87.7%	12.5
32	Developed recommendations	87.7%	12.5
36	Teacher could respond in writing	86.2%	14
4	Found teacher expectations of students	84.6%	15
26	Solicited teacher analysis of data	83.1%	16
28	Encouraged consideration of alternatives	81.5%	17.5
10	Recorded data on teacher questions	81.5%	17.5
11	Recorded data on student responses	80.0%	19
3	Met prior to observation	76.9%	20.5
23	Examined record of student achievement	76.9%	20.5
22	Compared with Alberta Program of Studies	67.7%	22
9	Made notes of classroom dialogue	66.2%	23
18	Recorded data on specific student	64.6%	24
33	Developed recommendations with teacher	63.1%	25
2	Standards of performance developed	58.5%	26
31	Recommended resources	53.8%	27
15	Recorded data on teacher movement	52.3%	28
16	Recorded data on student movement	50.8%	29
1	Had written job description	49.2%	30
13	Recorded data on patterns of response	47.7%	31
34	Developed a plan of assistance	44.6%	32
29	Listened more than I talked	35.4%	33
7	Teacher chose observational strategies	29.2%	34
6	Suggested observational techniques	27.7%	35
14	Made audio recordings	1.5%	36.5
17	Made video recordings	1.5%	36.5

TABLE 20. Percentage of Principals Who Responded "Yes" to Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	Percentage of "Yes" Responses n = 211	Rank
25	Met with teacher after observation	97.6%	1
35	Teacher received a copy of report	95.7%	2
30	Gave praise and encouragement	94.3%	3
20	Observed for at least 30 minutes	93.8%	4
37	Appeal procedure available	91.5%	5
27	Encouraged teacher inferences & opinions	89.1%	6
36	Teacher could respond in writing	88.6%	7
19	Recorded student/teacher interactions	87.7%	8
12	Recorded data on on-task behavior	86.7%	9.5
3	Met prior to observation	86.7%	9.5
24	Examined student work	86.3%	11
8	Recorded impressions about classroom	85.3%	12
4	Found teacher expectations of students	82.5%	13.5
5	Found teacher concerns	82.5%	13.5
26	Solicited teacher analysis of data	80.6%	15
21	Examined teacher's planbook	74.4%	16
28	Encouraged consideration of alternatives	67.3%	17
11	Recorded data on student responses	65.9%	18.5
32	Developed recommendations	65.9%	18.5
33	Developed recommendations with teacher	64.9%	20
10	Recorded data on teacher questions	63.0%	21
22	Compared with Alberta Program of Studies	62.1%	22
2	Standards of performance developed	60.7%	23
9	Made notes of classroom dialogue	53.1%	24
13	Recorded data on patterns of response	51.2%	25
23	Examined record of student achievement	48.8%	26
18	Recorded data on specific student	47.4%	27
15	Recorded data on teacher movement	45.5%	28.5
16	Recorded data on student movement	45.5%	28.5
29	Listened more than I talked	43.6%	30
1	Had written job description	43.1%	31
7	Teacher chose observational strategies	41.2%	32
31	Recommended resources	37.9%	33
6	Suggested observational techniques	37.0%	34
34	Developed a plan of assistance	34.6%	35
14	Made audio recordings	1.9%	36
17	Made video recordings	0%	37

TABLE 21. Percentage of Evaluators Responding "Yes" to Items on the Modified Acheson/Shinn Instrument

Item #	Descriptor	Percentage of "Yes" Responses n = 347	Rank
25	Met with teacher after observation	98.3%	1
20	Observed for at least 30 minutes	95.4%	2
35	Teacher received a copy of report	95.1%	3
30	Gave praise and encouragement	91.9%	4
19	Recorded student/teacher interactions	89.3%	5.5
24	Examined student work	89.3%	5.5
8	Recorded impressions about classroom	88.8%	7
12	Recorded data on on-task behavior	87.0%	8.5
27	Encouraged teacher inferences & opinions	87.0%	8.5
37	Appeal procedure available	86.2%	10
36	Teacher could respond in writing	85.9%	11
5	Found teacher concerns	85.3%	12
4	Found teacher expectations of students	82.1%	13
21	Examined teacher's planbook	81.8%	14
26	Solicited teacher analysis of data	79.0%	15
3	Met prior to observation	77.2%	16
32	Developed recommendations	73.8%	17
28	Encouraged consideration of alternatives	70.6%	18
11	Recorded data on student responses	67.4%	19
22	Compared with Alberta Program of Studies	66.0%	20
10	Recorded data on teacher questions	65.7%	21
23	Examined record of student achievement	61.4%	22
33	Developed recommendations with teacher	60.5%	23
2	Standards of performance developed	59.1%	24
9	Made notes of classroom dialogue	56.8%	25
13	Recorded data on patterns of response	51.6%	26
18	Recorded data on specific student	50.7%	27
15	Recorded data on teacher movement	46.4%	28
16	Recorded data on student movement	45.5%	29
1	Had written job description	42.7%	30
31	Recommended resources	40.3%	31
29	Listened more than I talked	38.9%	32
34	Developed a plan of assistance	36.0%	33
7	Teacher chose observational strategies	35.2%	34
6	Suggested observational techniques	33.7%	35
14	Made audio recordings	1.7%	36
17	Made video recordings	0.3%	37

TABLE 22. Comparative Ranking of "Yes" Responses to Items on the Acheson/Shinn Instrument

Item #	Descriptor	Rank			
		A*	S	O	P
25	Met with teacher after observation	1	1	1.5	1
20	Observed for at least 30 minutes	2	2	1.5	4
35	Teacher received a copy of report	3	5	4.5	2
30	Gave praise and encouragement	4	10	7	3
19	Recorded student/teacher interactions	5.5	3	10.5	8
24	Examined student work	5.5	5	4.5	11
8	Recorded impressions about classroom	7	5	4.5	12
12	Recorded data on on-task behavior	8.5	12	8	9.5
27	Encouraged teacher inferences & opinions	8.5	14.5	9	6
37	Appeal procedure available	10	19	12.5	5
36	Teacher could respond in writing	11	14.5	14	7
5	Found teacher concerns	12	8	10.5	13.5
4	Found teacher expectations of students	13	13	15	13.5
21	Examined teacher's planbook	14	7	4.5	16
26	Solicited teacher analysis of data	15	17.5	16	15
3	Met prior to observation	16	25	20.5	9.5
32	Developed recommendations	17	10	12.5	18.5
28	Encouraged consideration of alternatives	18	17.5	17.5	17
11	Recorded data on student responses	19	20	19	18.5
22	Compared with Alberta Program of Studies	20	16	22	22
10	Recorded data on teacher questions	21	21.5	17.5	21
23	Examined record of student achievement	22	10	20.5	26
33	Developed recommendations with teacher	23	27	25	20
2	Standards of performance developed	24	24	26	23
9	Made notes of classroom dialogue	25	21.5	23	24
13	Recorded data on patterns of response	26	33	21	35
18	Recorded data on specific student	27	26	24	27
15	Recorded data on teacher movement	28	28	28	28.5
16	Recorded data on student movement	29	29	29	28.5
1	Had written job description	30	30.5	30	31
31	Recommended resources	31	30.5	27	33
29	Listened more than I talked	32	34	33	30
34	Developed a plan of assistance	33	32	32	35
7	Teacher chose observational strategies	34	35	34	32
6	Suggested observational techniques	35	33	35	34
14	Made audio recordings	36	36	36.5	36
17	Made video recordings	37	37	36.5	37

Spearman Rank Order Correlation Coefficients:
S:O $r = .94$; $p < .01$
S:P $r = .84$; $p < .01$
O:P $r = .90$; $p < .01$

* A = All respondents; S = Superintendents; O = Other Central Office Staff; P = Principals

24), and the examination of the teacher's planbook (Item 21). In addition, superintendents placed a much greater emphasis upon the examining the record of student achievement (Item 23).

Principals, more than other central office staff, and superintendents, encouraged teacher input in the post observation conference (Item 27), gave praise and encouragement more frequently (Item 30), and provided more opportunity for the teacher to respond to the report in writing (Item 36).

Superintendents developed recommendations to help the teacher improve instruction (Item 32) more frequently than other central office staff or principals.

Table 23 reports the percentage of superintendents, other central office staff, and principals who attained the minimum criteria in the areas of due process, the improvement of instruction, and teacher perception. The minimum criteria for satisfactory evaluation in each of these areas was defined as the subset of the items receiving a mean score of between one and 1.75 (as rated by the experts) on the modified Acheson/Shinn Instrument.

Of the 347 evaluations reported, only 15 met the minimum criteria for assuring due process. Other central office staff achieved a higher rate of meeting the criteria than did superintendents, who in turn did better than principals. An analysis of variance of the mean scores on

TABLE 23. Percentage of the Study Group Attaining the Minimum Criteria in the Areas of Due Process, the Improvement of Instruction and Teacher Perception

	Superintendents N = 71	Other Central Office Staff N = 65	Principals N = 211
Due Process	4.2%	10.8%	2.4%
Improvement of Instruction	1.4%	0%	1.4%
Teacher Perception	2.8%	16.9%	8.1%

due process items showed a difference in the means, significant at the .01 level. Other central office staff scored higher than principals who in turn were higher than superintendents. The mean score for all respondents was 12.5 (out of 17 due process items).

The items rated essential for assuring due process that were not used by more than 50% of the respondents included:

Item 34, the development of a plan of assistance (superintendents, other central office staff, and principals).

Item 31, the recommendation of resources (superintendents and principals).

Item 23, the examination of the record of student achievement (principals).

Item 33, the development of recommendations in cooperation with the teacher (superintendents).

One superintendent and three principals met the minimum criteria for the improvement of instruction. Analysis of variance of the mean scores on improvement of instruction items showed a difference in the means, significant at the .01 level, with other central office staff higher than principals who in turn were higher than superintendents. The mean score on the 25 improvement of instruction items was 18.6.

The items essential for improvement of instruction that were not used by more than 50% of the respondents included:

Item 34, the development of a plan of assistance (superintendents, other central office staff, and principals).

Item 29, I listened more than I talked (superintendents, other central office staff, and principals).

Item 31, the recommendation of resources (superintendents and principals).

Item 33, the development of recommendations in cooperation with the teacher (superintendents).

Item 3, meeting prior to the observation (superintendents).

Twenty nine respondents, two superintendents (2.8%), 11 other central office staff (16.9%), and 17 principals (8.1%) met the minimum criteria established by teachers. Analysis of variance of the mean scores on teacher perception items showed a difference in the means, significant at the .01 level, with other central office staff higher than principals who in turn were higher than superintendents. Of the 16 items identified by teachers as essential to formal teacher evaluation, respondents achieved a mean score of 12.5.

The items perceived by teachers to be essential in a formal evaluation that were not used by more than 50% of the respondents included:

Item 34, the development of a plan of assistance (superintendents, other central office staff, and principals).

Item 31, the recommendation of resources (superintendents and principals).

Item 33, the development of recommendations in cooperation with the teacher (superintendents).

Item 3, meeting prior to the observation (superintendents).

Relationships Between Demographic Factors and Scores on the Modified Acheson/Shinn Instrument

Introduction

Of the 37 items on the Modified Acheson/Shinn Instrument, 26 were rated by the experts as essential to the improvement of instruction and the assurance of due process in formal teacher evaluation. Of the remaining 11 items, all but items 14 and 17 (audio and video recording of lessons) were rated by all groups as desirable or acceptable evaluation strategies. Experts in due process rated items 14 and 17 as marginally unacceptable; however, the use of audio and video tapes in the evaluation of teaching is a well established practice and is one of the recommended strategies in the clinical supervision model (Acheson & Gall, 1980, p. 132).

The scores on the entire instrument correlate highly with the scores on the subsets of items rated as essential to assuring due process (r = .89) and for the improvement of instruction (r = .95); thus, the score on the instrument is regarded as a determinant of the "completeness" of the evaluation. The higher the score, the more complete the evaluation.

The section that follows reports the statistical relationships between the respondents' demographic characteristics and the completeness of their last formal teacher evaluation. In the interests of readability, statistical data will be reported in Appendix D, and the text on the following pages will merely report and discuss the statistical patterns.

Experience

To explore the relationship between years of experience as a teacher evaluator and the completeness of the evaluation, the Pearson product-moment correlation coefficient was calculated. Initial calculation of the coefficient suggested a very slight, non significant, negative correlation between the number of years of experience as a teacher evaluator and the score on the instrument. A recalculation of the coefficient broken down by administrator category, revealed no statistically significant relationship for other central office staff and principals. However, superintendents showed a negative correlation (r = -0.24) significant at the .05 level. This means that more experienced superintendents in this study tended to score lower than those with less experience.

It is possible that this somewhat unexpected finding is caused by the fact that almost one third of Alberta superintendents have 16 or more years of experience as a teacher evaluator, and thus may well have learned their evaluation strategies in a period when the inspectoral model was prevalent, strategies that are incompatible with the clinical supervision model upon which the instrument is based.

University Courses

Calculation of the Pearson correlation coefficient shows a significant relationship ($r = .14; p < .01$) between the score on the instrument and the number of university courses in the evaluation of teachers undertaken by the respondents. The more university courses taken, the higher the score on the instrument. Superintendents averaged the greatest number of university courses, followed by other central office staff, and principals (Table 2).

Inservice Training

No statistically significant relationship was found between the score on the instrument and inservice training; however, a low but significant ($r = .1; p < .05$) positive correlation existed between inservice training and the score on the due process subset. Respondents with more inservice training scored higher on the due process subset. Other central office staff had more inservice training than superintendents or principals (Table 3).

Number of Teachers

To examine the relationship between the completeness of the evaluation and the number of teachers supervised (for superintendents this means the number of teachers in the jurisdiction; for other central office staff, the number of teachers in their area of responsibility; and for principals, the number of teachers in their school), the Pearson product-moment correlation coefficient was calculated. A statistically significant ($r = .15$; $p < .01$), positive relationship was found between the score on the due process subset and the number of teachers supervised. No significant relationships were found between the number of teachers supervised and the completeness of the evaluation, the improvement of instruction subset, or the teacher preference subset.

When the same test was used to examine the relationship between the number of teachers evaluated and the completeness of the evaluation, a positive correlation, significant at the .05 level, was found. In addition, significant correlations exist between the number of teachers evaluated and the due process subset ($r = .16$;

$p < .01$), and the improvement of instruction subset ($r = .1$; $p < .05$). No statistically significant relationship was found in the case of the teacher preference subset.

Category of Teacher

To determine what differences existed in the evaluative practices of respondents with respect to the category of teacher evaluated (i.e., first year, experienced but new to the school/system, or tenured), an analysis of variance of the mean scores of respondents, broken down by teacher category, was carried out. No significant differences in the means were found.

Presence of Policy

Respondents were asked to indicate (yes, no, or unsure) whether their jurisdiction had a written policy on teacher evaluation (Table 4). Although the mean for "yes" responses was higher than that for the "unsure" responses, which in turn was higher than for the "no" responses, an analysis of variance showed no significant differences between the means indicating that chance factors alone could account for the variation.

This means that the perceived presence (or absence) of policy has no relationship with the completeness of the evaluation carried out by respondents.

Adherence to Policy

No significant relationship was found between the reported level of adherence to the teacher evaluation policy and the completeness of the evaluation, nor to the due process, improvement of instruction, or teacher preference subsets. This means that the completeness of the evaluation was unrelated to the degree of adherence to teacher evaluation policy.

Classroom Visits

The Pearson product-moment correlation coefficient was calculated to examine the relationship between the number of classroom visits made, and the completeness of the evaluation. A statistically significant positive correlation was found ($r = .13$; $p = .01$). Similarly, the relationship between the time spent in classroom observation, and the completeness of the evaluation was examined, and a significant positive correlation was found ($r = .3$; $p < .01$).

The possible relationships between grade levels observed, or subjects observed, and the completeness of the evaluation were examined by using an analysis of variance of the mean scores of respondents, broken down by grade or subject level. No significant differences in the means were found relating to the grade level observed. A similar result was obtained for all subjects except for science.

Respondents who observed science lessons scored significantly higher ($p < .05$) than those who did not.

This means that evaluators who make more classroom visits, or who spend more time in observations, tend to do a more complete evaluation than those who visit less often, or spend less time in observation. The grade level and subject observed (except for science) make no difference to the completeness of the evaluation.

Purpose of the Evaluation

Respondents were given a list of ten purposes for evaluation and were asked to indicate the primary purpose of the last formal evaluation. The difference between mean scores on the modified Acheson/Shinn instrument (the completeness measure) of respondents who checked a given item, and those who did not, was examined using analysis of variance. No significant differences in the means were found when the purpose was: awarding a permanent contract, providing a basis for dismissal, providing a basis for transfer, providing a basis for promotion, providing a basis for retention in position, determining the inservice needs of the teacher, or when the respondent checked the "other" category.

A significantly higher mean score was obtained by respondents when the purpose was to record the performance of a resigning or retiring teacher ($p < .05$) or when the purpose was to improve the performance of the teacher ($p < .01$).

A significantly lower mean score was obtained when the purpose was related to recommending permanent certification.

This means that respondents whose primary purpose was to improve the performance of the teacher, or to record the performance of a resigning or retiring teacher, tended to do a more complete evaluation than respondents who did not have these primary purposes. Respondents whose primary purpose was related to recommending for permanent certification tended to do a less complete evaluation.

Initiating Factors

Respondents were given a list of six initiating factors and were asked to indicate the primary initiating factor in the last formal evaluation. The difference between mean scores on the modified Acheson/Shinn instrument (the completeness measure) or respondents who checked a given item, and those who did not, was examined using analysis of variance. No significant differences in the means were found when the initiating factor was: a parental complaint, concerns arising from informal observations, a teacher request, the need for documentation, or when respondents checked the "other" category. The mean score was significantly higher ($p < .05$) when the evaluation was initiated as a routine evaluation according to district policy than when it was not.

Outcome of the Evaluation

Respondents were given a list of nine possible outcomes and were asked to indicate the outcome of the last formal evaluation. The difference between mean scores on the modified Acheson/Shinn instrument (the completeness measure) of respondents who checked a given item, and those who did not, was examined using analysis of variance. No significant differences in the means were found when the outcome was: the teacher was/will be awarded a permanent contract, the teacher was/will be dismissed, the teacher was/will be promoted, the teacher will continue in present position, the teacher was/will be evaluated by another evaluator, the teacher challenged the evaluation report, or when the respondents checked the "other" category.

The mean score for respondents was significantly higher ($p < .01$) when, as a result of the evaluation, an inservice plan was developed for the teacher, and significantly lower ($p < .01$) when the evaluation resulted in a recommendation for permanent certification.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The case of James Keegstra (Keegstra v. County of Lacombe, 1983), who was dismissed from his teaching position after it was revealed that he had been teaching a social studies program that differed substantially from the authorized Alberta curriculum, rekindled public and political interest in the evaluation of teachers. This renewed interest contributed to the development, in 1984, of a teacher evaluation policy by Alberta Education. In essence, this policy requires that Alberta school jurisdictions put into place fair and consistent board policies to assure the regular evaluation of teachers for the purposes of (1) assisting in the professional development of teachers, and (2) taking appropriate action with respect to teachers whose performance is unacceptable.

This study provides benchmark data for assessing the impact of the Alberta Education policy, and information to stakeholder groups on current practices and the minimum criteria to be met for satisfactory teacher evaluation.

The primary purpose of this study was to describe the state of formal teacher evaluation in Alberta in the 1983-84 school year. The specific aims were:

1. To collect demographic information about the evaluators and teachers involved in formal teacher evaluation in Alberta.
2. To describe the initiating factors, intended purposes and outcomes of formal teacher evaluation.
3. To describe the procedures used by evaluators in formally evaluating teachers.
4. To analyze the quality of teacher evaluation procedures with respect to minimum requirements to improve instruction and to assure due process.
5. To identify the relationships between selected demographic factors and the completeness of the evaluation.

The Literature

The literature related to teacher evaluation is extensive, diverse, and sometimes contradictory. The review of the literature for this study traces the development of evaluation from its beginnings as an inspectoral, autocratic process, through the "scientific" and "democratic" models of the early twentieth century to the multigoal, democratic interactive process exemplified by Acheson's (1982) model of the clinical supervision process.

The literature identifies a great many purposes for teacher evaluation, but they can all be incorporated into two major categories, namely purposes related to the improvement of the teacher's instructional performance, and purposes involving judgemental functions related to decision making and teacher competency.

The profound impact of the evaluation of teachers on student learning is dealt with in some early literature, but more recent research has focussed upon teaching behaviors rather than student outcomes.

Teacher evaluation in Alberta is the subject of a great many opinion articles but few research studies. The studies that have been made tend to focus upon the superintendent's perception of the policies and practices prevalent in their jurisdiction; however, one recent study (Townsend, 1984) documented the process of implementation of a new policy on teacher supervision and evaluation, and demonstrated that high levels of acceptance and participation, and satisfaction with the process can be attained through appropriate implementation strategies.

The Design of the Study

To assess the state of formal teacher evaluation in Alberta, the following steps were taken:

1. A three part questionnaire, based upon existing instruments, was developed. Section one collected demographic data about the responding evaluator. Section two addressed the "last formal teacher evaluation carried

out," and collected data related to the initiating factors, purposes, and outcomes of that evaluation. Section three, the Modified Acheson/Shinn instrument, collected data on the supervisory practices used in the last formal teacher evaluation.

2. The questionnaire was administered to a study group consisting of all Alberta superintendents, all other central office staff who were members of the Conference of Alberta School Superintendents as of December 1983, and a 25% sample of Alberta school principals.

3. Minimum criteria for satisfactory evaluation in the areas of "due process" and "improvement of instruction" were established by submitting Section 3 of the questionnaire, the Modified Acheson/Shinn instrument, to experts for adjudication. Teacher perceptions of appropriate evaluation strategies were assessed by administering the Modified Acheson/Shinn instrument to a sample of teachers.

4. Data from the questionnaires were processed using the SPSSX Sprint package. Frequency distributions and means were generated for all variables. Ratings by experts and teachers of the 37 items on the Modified Acheson/Shinn instrument were summed and averaged and three subsets delineating the minimum criteria for satisfactory evaluation in the areas of due process, improvement of instruction, and teacher perception were generated. Demographic factors were described and the relationships between the demographic

variables and the scores on the Modified Acheson/Shinn instrument and its subsets were examined.

Findings

1. On average, superintendents had 13.8 years experience in teacher evaluation, had undertaken 1.87 university courses related to teacher evaluation, and had engaged in 18.5 hours of related inservice training in the last five years. By comparison, other central office staff had 11.4 years experience, 1.76 university courses, and 23.4 hours of inservice training. Principals averaged 9.3 years experience, had taken 1.0 university courses, and 14.9 hours of inservice training.

2. Not all respondents were involved in teacher evaluation during the study period but 71.7% of superintendents, 67% of other central office staff, and 73.3% of principals reported that they had evaluated one or more teachers. Of the respondents who did evaluate teachers, superintendents averaged 20.8 teachers, other central office staff, 25.1 teachers and principals, 8.7 teachers.

3. During the study period, respondents reported a total of 4,924 evaluations performed. Of these, superintendents did 29.5%, other central office staff did 33.1%, and principals did 37.3%. Of the evaluations performed, 21.9% were of first year teachers, 17.3% were of

experienced teachers new to the school/system, and 60.8% were tenured.

4. Respondents, especially superintendents, generally rated teacher evaluation as a high priority item in relation to all their other duties, but most respondents considered the time available to be inadequate. Respondents who rated teacher evaluation as a high priority scored significantly higher on the Modified Acheson/Shinn instrument, the measure of the completeness of the evaluation; however, the perceived amount of time available had no significant impact on the completeness of the evaluation.

5. Over 80% of respondents indicated that their jurisdiction had a written policy on formal teacher evaluation, but less than 50% of the respondents who evaluated teachers followed the policy "strictly to the letter." Neither the presence of policy, nor the degree to which it was followed, related significantly to the completeness of the evaluation.

6. Over 80% of respondents made two or more classroom visits during the last formal teacher evaluation, and the average time spent in classroom observation was over two hours. Junior high teachers comprised the largest group of teachers evaluated and language arts and math were the subjects most commonly observed. Respondents who made more classroom visits or spent more time in classroom observation during the last formal teacher evaluation scored

significantly higher on the completeness measure than those who visited less often, or spent less time in observation. The grade level and subject observed (except science) was not significantly related to the completeness of the evaluation.

7. The majority of the last formal teacher evaluations carried out by the study group were initiated as routine evaluations according to school board policy. Their primary purposes were: to improve the performance of the teacher, to award a permanent contract, to provide a basis for retention in position, or to recommend for permanent certification. As a result of the evaluation, most teachers were retained in their present position, received a permanent contract or were recommended for permanent certification. Teacher dismissal was cited as a primary purpose of the evaluation by 4.1% of respondents and was reported as an outcome of the evaluation by 4.8% of respondents. Formal teacher evaluation was rarely used as a basis for transfer or promotion.

8. When the evaluation was initiated as a routine evaluation according to district policy, respondents scored significantly higher on the completeness measure than when they did not. Other initiating factors were not significant in affecting the completeness of the evaluation.

When the primary intended purpose of the last formal evaluation was to improve the performance of the teacher, or to record the performance of a resigning or retiring teacher, respondents scored significantly higher on the completeness measure than when it was not. When the purpose was to recommend for permanent certification, respondents scored significantly lower on the completeness measure. Other intended purposes did not significantly influence the respondents' score on the completeness measure.

When, as a result of the evaluation, an inservice plan was developed for the teacher, respondents scored higher on the completeness measure than when no plan was developed. If the teacher was recommended for permanent certification as a result of the evaluation, the respondents scored significantly lower on the completeness measure.

9. Experts identified 17 of the 37 items on the Modified Acheson/Shinn instrument as essential to assuring due process in formal teacher evaluation. In essence, the items related to due process suggest that: (a) standards of performance must be developed for the teacher, (b) a variety of objective data must be collected, (c) a post conference must be held with the teacher to discuss the data and develop recommendations for improvement, (d) a plan of assistance must be developed for the teacher, and (e) the teacher must be given a copy of the evaluation report and the opportunity to respond in writing.

Experts in improvement of instruction identified 25 of the Modified Acheson/Shinn items as essential. In essence the improvement of instruction criteria would require that the due process criteria be met, and: (a) a preconference must be held to discover what the teacher expected the students to be doing, and to discern what problems or concerns the teacher had, (b) during the post conference, greater teacher input should be sought and appropriate praise and encouragement given, and (c) a formal appeal procedure should be available if the teacher challenged the report.

10. The sixteen items identified as essential by teachers form a subset of the improvement of instruction items. The most notable differences fall in the areas related to the establishment of standards and the collection of objective data. Teachers rate these items lower than either of the groups of experts, and no objective data collection strategies were rated as essential by teachers. In addition, teachers rated teacher input items higher than either group of experts.

11. The patterns of "yes" responses to the 37 items on the Modified Acheson/Shinn instrument were somewhat similar for superintendents, other central office staff, and principals; however, noteworthy differences occurred on ten items:

Less than half the superintendents, but more than three quarters of other central office staff and principals met with the teacher prior to the classroom observation (Item 3).

An appeal procedure (Item 37) was more likely to be made available when the evaluation was carried out by a principal (91.5%), than when carried out by other central office staff (87.7%), or superintendents (69%).

Superintendents and other central office staff were more likely than principals to record student/teacher interactions (Item 19), record impressions about the classroom (Item 8), examine students' work (Item 24), and examine the teacher's planbook (Item 21). In addition, superintendents placed a greater emphasis upon the examination of the record of student achievement (Item 23).

Principals, more than other central office staff, and superintendents: encouraged teacher input in the post observation conference (Item 27), gave praise and encouragement (Item 30), and provided the opportunity for the teacher to respond to the report in writing (Item 36).

Superintendents developed recommendations to help the teacher improve instruction (Item 32) more frequently than other central office staff or principals.

12. Few of the respondents met the minimum criteria to assure due process (4.5%), and fewer met the criteria for the improvement of instruction (1.3%). Essential due process items not used in the last evaluation by more than 50% of respondents were:

Item 34, the development of a plan of assistance (superintendents, other central office staff, and principals).

Item 31, the recommendation of resources (superintendents and principals).

Item 23, the examination of the record of student achievement (principals).

Item 33, the development of recommendations in cooperation with the teacher (superintendents).

The items essential for the improvement of instruction that were not used by more than 50% of respondents included Items 34, 31, and 33 as noted above and:

Item 29, I listened more than I talked (superintendents, other central office staff, and principals).

Item 3, I met with the teacher prior to the observation (superintendents).

Twenty nine (8.3%) of the respondents met the minimum criteria established in the teacher perception subset. The items deemed essential by teachers that were not used by more than 50% of respondents were Items 34, 31, 33, and 3 as noted above.

Conclusions and Implications

Demographic Factors

The demographic factors that relate to the respondents and that are correlated with a significantly more complete evaluation are: the placing of a high priority on teacher evaluation, and high levels of university training. In addition, a positive correlation exists between these two factors.

Experience (except in the case of superintendents), the amount of inservice training, the number of teachers supervised and the adequacy of the time available for teacher evaluation were not significantly related to completeness.

This implies that, in the selection of personnel who will have a major responsibility in the area of teacher evaluation, the primary criteria should include those related to a commitment to teacher evaluation and adequate related university training.

Inservice Training

The lack of a significant relationship between inservice training and the completeness of the evaluation is almost certainly due to the model of inservice training commonly in use in Alberta, namely the "single shot," one or two day lecture or workshop. Studies by Joyce and Showers (1981) indicate that, for inservice training to cause a change in behavior, five training elements are essential: theory, demonstration, practice, feedback, and coaching. The "single shot" strategy can, at best, encompass the first four of these components. This, say Joyce and Showers, can result in a transfer effect of up to 10% at the classroom level. To achieve a substantial effect, all five elements, used in sequence are required. When this is done, a 90% transfer effect can be achieved.

The potential for the successful implementation of this model in Alberta is demonstrated by the positive outcomes reported in Townsend's (1984) study of the implementation of a policy on teacher evaluation in the Lethbridge School District # 51.

The implications of the present lack of a relationship between inservice training and completeness of evaluation, the Joyce and Showers (1981) research, and the Townsend (1984) study are far reaching. They suggest that, if a change in the evaluative behavior of superintendents, other central office staff, and principals is to be effected, the whole process of inservice training in Alberta should be restructured.

Policy

This study found no relationship between the presence of a written policy on formal teacher evaluation and the completeness of the last evaluation, nor was the level of adherence to policy significantly related to completeness; however, routine evaluations, initiated in accordance with board policy tended to be more complete than those not initiated for this reason. This suggests that school board policies may serve no useful purpose, except to initiate teacher evaluation.

In the preliminary stages of this study in 1983, the researcher collected and examined the teacher evaluation policies from the majority of Alberta school jurisdictions and encountered an incredible diversity of policies. They ranged from complex policies that incorporated clearly delineated strategies and instruments, to brief statements of intent; from policies clearly designed to assure due process, to policies that obviously contravened recent human rights legislation. This informal survey confirmed Reikie's (1977, p. v) statement that "Overall, there were few school systems with clearly structured evaluation policies and practices. Numerous jurisdictions appeared to have no policies regarding many facets of teacher evaluations. Among the jurisdictions there was a wide variety of practices. Few practices were found to be consistent across Alberta."

The absence of a relationship between policy and the completeness of teacher evaluation, and the documented lack of consistency of teacher evaluation policies across the province suggests that the development of teacher evaluation policies at the local board level may be an ineffective mechanism for the implementation of teacher evaluation practices across the province.

The State of Oregon, U.S.A., has adopted a statewide model which prescribes a basic form of teacher evaluation, consistent with the clinical supervision model, yet leaves local boards considerable autonomy within its basic guidelines. That model is delineated in Oregon Revised Statute 342.850:

> Teacher evaluation; form; personnel file content. (1) The district superintendent of every school district, including superintendents of education service districts, shall cause to have made at least annually but with multiple observations an evaluation of performance for each probationary teacher employed by the district and at least biennially for every other teacher. The purpose of the evaluation is to allow the teacher and the district to determine the teacher's development and growth in the teaching profession and to evaluate the performance of the teaching responsibilities. A form for teacher evaluation shall be prescribed by the State Board of Education and completed pursuant to rules adopted by the district school board.
>
> (2) (a) The district school board shall develop an evaluation process in consultation with school administrators and with teachers. If a school district's teachers are represented by a local bargaining organization, the board shall consult with the teachers belonging to and appointed by the local bargaining organization in the consultation required by this paragraph.
>
> (b) The district school board shall implement the evaluation process that includes:
>
> (A) The establishment of job descriptions and performance standards which include but are not limited to items included in the job description;
>
> (B) A preevaluation interview which includes but is not limited to the establishment of performance goals for the teacher, based on the job description and performance standards;
>
> (C) An evaluation based on written criteria which include the performance goals; and
>
> (D) A post-evaluation interview in which (i) the results of the evaluation are discussed with the teacher and (ii) a written program of assistance for improvement, if needed, is established.
>
> (c) Nothing in this subsection is intended to prevent a district from consulting with any other individuals.
>
> (3) Except in those districts having an average daily

> membership, as defined by ORS 327.006, of fewer than 200 students, the person or persons making the evaluations must hold teaching certificates. The evaluation shall be signed by the school official who supervised the teacher. A copy of the evaluation shall be delivered to the teacher.
> (4) The evaluation reports shall be maintained in the personnel files of the district.
> (5) The evaluation report shall be placed in the teacher's file only after reasonable notice to the teacher.
> (6) A teacher may make a written statement relating to any evaluation, reprimand, charge, action or any matter placed in the teacher's personnel file and such teacher's statement shall be placed in the personnel file.
> (7) The personnel file shall be open for inspection by the teacher, the teacher's designees and the district school board and its designees. District school boards shall adopt rules governing access to personnel files, including rules specifying whom school officials may designate to inspect personnel files.

Minimum Criteria for Satisfactory Evaluation

As the findings of this study show, few respondents met the minimum criteria deemed necessary to assure due process or the improvement of instruction in formal teacher evaluation. The picture, however, is not as bleak as it first may seem, since the findings also reveal that, on average, evaluators carried out almost three quarters of the strategies necessary to meet those requirements and repeating patterns were found in the items commonly omitted. This suggests that with appropriate training, most evaluator performance could be readily upgraded to meet the minimum criteria.

The strategies deemed essential by teachers differed from those of experts in that teachers gave lower rankings to items related to the establishment of standards and the collection of objective data. This suggests to the researcher that teachers are anxious about evaluation and particularly those processes which are essential in termination cases, namely the due process items. The findings of this study suggest that the great majority of formal evaluations carried out are positive, rather than punitive in intent, and that the apparent fears exhibited by teachers are generally groundless. However, it would be folly to dismiss those fears, since, if one of the primary purposes of evaluation is to improve instruction, a negative perception of some of the essential processes could seriously inhibit the successful implementation of any useful program of evaluation.

Recommendations

As a result of the findings of this study, and the conclusions drawn therefrom, it is recommended that:

1. When engaging personnel whose major responsibility will be the evaluation of teachers, school boards hire persons who place a high priority upon teacher evaluation and who have related university training.

2. When organizing inservice training to upgrade evaluators in their jurisdictions, school boards ensure that the model of inservice training used is one that results in

a change in behavior at the classroom level, namely, one that includes theory, demonstration, practice, feedback, and coaching.

3. That school boards involve classroom teachers in those inservice programs so that they become more knowledgeable, and more committed to the processes of formal evaluation.

4. The Government of Alberta enact legislation to ensure that teacher evaluation is carried out in a fair and consistent manner throughout the province.

Recommendations for Further Study

This study has described the formal teacher evaluation practices in Alberta during the period September 1, 1983 to April 30, 1984, as reported by superintendents, other central office staff, and principals. In addition, it has assessed the adequacy of the current evaluative practices with respect to minimum criteria in the areas of due process and the improvement of instruction, and explored the relationships between the completeness of the evaluation and demographic factors.

One limitation of this study is that it has described the current evaluative practices using data collected from the evaluators, not from those being evaluated. Other studies (e.g. Shinn, 1976) suggest that the perceptions of teachers and administrators may be different and so future studies might examine the teacher perspective in more depth.

Data collected in this study showed that teachers did not rate the establishment of standards of performance and objective data collection techniques as highly as did experts in due process and improvement of instruction. Future studies might focus on the reasons for this difference and the impact of inservice training upon teacher perceptions.

Joyce and Showers (1981) have demonstrated the need for a model of inservice training that includes theory, demonstration, practice, feedback, and coaching. They suggest that the transfer of knowledge into actual classroom practice occurs when all of these components are used in sequence. Future studies could explore the impact of this inservice model in improving the quality of teacher evaluation in Alberta.

The review of the literature revealed that early in this century, researchers discovered that the evaluation of teachers had a dramatic effect on student outcomes. No recent studies were found describing the relationship between modern teacher evaluation strategies and student performance. Future studies might examine the differences between the performance of students in classrooms where the teachers were evaluated, as opposed to those where no teacher evaluation took place.

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APPENDIX A

THE QUESTIONNAIRE

FORMAL TEACHER EVALUATION IN ALBERTA

This questionnaire surveys current teacher evaluation practice in Alberta. Since it has the potential for identifying needs and proposing solutions for an issue that is of current concern, your cooperation in responding to it is appreciated. The results of the study (which should be of value to you and your colleagues) will be disseminated by the end of the year.

It should take about 10 minutes to complete the questionnaire.

For the purpose of this research project, a formal teacher evaluation is defined as one that includes a written report containing a recommendation or rating.

SECTION 1

Please respond to the following:

1. Position title (*check one*) (1) Superintendent ○ (2) Other Central Office Staff ○ (3) Principal ○
2. How many years experience as a teacher evaluator do you have? ___
3. How many university credit courses in teacher evaluation have you completed? ___
   (*U.S. graduates count 6 semester hours or 9 term hours as 1 course*)
4. How many hours of in-service training in teacher evaluation have you completed in the last 5 years? ___
5. Respond in the appropriate position category:

   Superintendent: How many teachers are in your jurisdiction? ___
   (*If you are superintendent of more than one jurisdiction, please indicate the TOTAL number of teachers you are responsible for.*)

   Other Central Office: How many teachers are in your area of responsibility? ___

   Principals: How many teachers are in your school? ___
6. How many of these are first year teachers? ___
7. How many are experienced teachers new to your school/system? ___
8. How many are tenured? ___
9. Check to indicate whether your jurisdiction has a written policy on formal teacher evaluation.
   (1) Yes ○ (2) No ○ (3) Unsure ○
10. In relation to all your other duties, rate (*by circling the appropriate number*) the adequacy of the time you have available for teacher evaluation.
    Totally adequate 1 2 3 4 5 Totally inadequate
11. In relation to all of your duties, rate (*by circling the appropriate number*) the priority of formal teacher evaluation.
    Very High Priority 1 2 3 4 5 Very Low Priority

IF YOU HAVE NOT FORMALLY EVALUATED A TEACHER SINCE SEPTEMBER 1, 1983, PLEASE STOP HERE AND RETURN THIS SURVEY IN THE SELF-ADDRESSED STAMPED ENVELOPE. THANK YOU.

Of the teachers you formally evaluated between September 1 and April 30 1984.

12. How many were first year teachers? ___
13. How many were experienced teachers new to your school/system? ___
14. How many were tenured? ___

SECTION 2

RECALL THE LAST FORMAL TEACHER EVALUATION YOU CARRIED OUT AND RESPOND TO THE REMAINING QUESTIONS WITH RESPECT TO THAT EVALUATION.

---

1. The teacher was: (1) A first year teacher ○ (2) Experienced but new to your school/system ○ (3) Tenured. ○

2. Grade level(s) observed ___

3. Subject(s) observed (*check as appropriate*) (1) Math ○ (2) Language Arts ○ (3) Social Studies ○ (4) Sciences ○ (5) Other ○ (*Please specify*) ________________

4. Number of separate classroom visitations ___

5. Minutes spent in actual classroom observations ___

6. If your jurisdiction has a written evaluation policy, rate (*by circling the appropriate number*) the degree to which you adhered to policy.
Strictly to the Letter 1 2 3 4 5 Not at All

7. Rate, (*by circling the appropriate number*) your perception of the teacher's performance.
Excellent 1 2 3 4 5 Unsatisfactory

8. Check the primary intended purpose of the last formal evaluation.

1. ○ Recommending permanent certification
2. ○ Awarding a permanent contract
3. ○ Providing a basis for dismissal
4. ○ Recording the performance of a resigning or retiring teacher
5. ○ Providing a basis for transfer
6. ○ Improving the performance of the teacher
7. ○ Providing a basis for promotion
8. ○ Providing the basis for retention in position
9. ○ Determining the inservice needs of the teacher
10. ○ Other - Please specify ________________

9. Check the primary condition that was involved in initiating the last formal evaluation.

1. ○ Parental complaint
2. ○ Routine evaluation according to District Policy
3. ○ Concerns arising from informal observations
4. ○ Teacher request
5. ○ Need for documentation
6. ○ Other. Please specify ________________

10. As a result of the evaluation:
(*Check all that apply*)

1. ○ The teacher was/will be recommended for permanent certification
2. ○ The teacher was/will be awarded a permanent contract
3. ○ The teacher was/will be dismissed
4. ○ The teacher was/will be promoted
5. ○ The teacher was/will continue in present position
6. ○ An in-service plan was/will be developed for the teacher
7. ○ The teacher was/will be evaluated by another evaluator
8. ○ The teacher challenged the evaluation report
9. ○ Other - Please specify ________________

SECTION 3

Respond to the following statement in relation to the last formal teacher evaluation you conducted.

1. Yes ○ No ○ The teacher had a written job description.
2. Yes ○ No ○ Standards of performance had been developed for the teacher.
3. Yes ○ No ○ I met with the teacher prior to the observation.
4. Yes ○ No ○ I found out what the teacher expected the students to be doing during the visit.
5. Yes ○ No ○ I found out what concerns or problems the teacher had.
6. Yes ○ No ○ I suggested a variety of observational techniques which could be used during the visit.
7. Yes ○ No ○ The teacher had input in determining observational strategies and the type of data to be collected.
8. Yes ○ No ○ I recorded impressions about the appearance of the classroom.
9. Yes ○ No ○ I made verbatim notes of classroom dialogue.
10. Yes ○ No ○ I recorded data on the teacher's questions for later analysis.
11. Yes ○ No ○ I recorded data on students' responses to teacher's questions.
12. Yes ○ No ○ I recorded data on student on-task behavior.
13. Yes ○ No ○ I recorded data on the patterns of students' responses.
14. Yes ○ No ○ I made audio recordings of the lesson.
15. Yes ○ No ○ I recorded data on teacher movement patterns.
16. Yes ○ No ○ I recorded data on student movement patterns.
17. Yes ○ No ○ I made video recordings of the lessons.
18. Yes ○ No ○ I recorded data on the behavior of a specific student.
19. Yes ○ No ○ I recorded subjective data on the quality of student/teacher interaction.
20. Yes ○ No ○ I remained in the classroom for at least 30 minutes when I visited.
21. Yes ○ No ○ I examined the teachers' planbook.
22. Yes ○ No ○ I specifically checked that the program was in accord with the Alberta Program of Studies.
23. Yes ○ No ○ I examined the Record of Student Achievement.
24. Yes ○ No ○ I examined student work.
25. Yes ○ No ○ I met with the teacher after the observations.
26. Yes ○ No ○ I solicited the teacher's analysis of the data.
27. Yes ○ No ○ I encouraged the teacher to make inferences and to express feelings and opinions about the observational data.
28. Yes ○ No ○ I encouraged the teacher to consider alternative teaching techniques and explanations of classroom events.
29. Yes ○ No ○ I listened more than I talked during the post observation conference.
30. Yes ○ No ○ I gave praise and encouragement for specific growth in the teacher's teaching skills.
31. Yes ○ No ○ I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve.
32. Yes ○ No ○ I developed recommendations to assist the teacher improve instruction.
33. Yes ○ No ○ I developed recommendations in cooperation with the teacher.
34. Yes ○ No ○ I developed a plan of assistance for the teacher as an outcome of the evaluation.
35. Yes ○ No ○ I gave the teacher a copy of the evaluation report.
36. Yes ○ No ○ The teacher was given the opportunity to respond in writing to the report.
37. Yes ○ No ○ The teacher had recourse to a formal appeal procedure if he/she challenged the report.

If you have any comments which would assist the researcher in describing the current state of formal evaluation in Alberta, please use the next page, or attach additional sheets as necessary.

Thank you for your assistance in completing this questionnaire, would you please return it in the self-addressed stamped enveloped provided.
Thank you.

FOR OFFICE USE ONLY:
38 DPY ○ N ○
39 IIY ○ N ○

A.N. Duncan
Lakeland School District #5460
Postal Bag Service "A"
BONNYVILLE, Alberta T0A 0L0

APPENDIX B

THE MODIFIED ACHESON/SHINN INSTRUMENT

Listed below are thirty seven statements of strategies or activities commonly used by evaluators in the formal evaluation of teachers.
(A formal evaluation includes a __written report__ containing a __recommendation or rating__.)

By checking the appropriate box, please rate each statement with respect to it's importance in a __formal evaluation__ designed to __improve instruction__.

	ESSENTIAL (high priority)	DESIRABLE (moderate priority)	ACCEPTABLE (low priority)	NOT ACCEPTABLE	
1.	①	②	③	④	The teacher had a written job description.
2.	①	②	③	④	Standards of performance had been developed for the teacher.
3.	①	②	③	④	I met with the teacher prior to the observation.
4.	①	②	③	④	I found out what the teacher expected the students to be doing during the visit.
5.	①	②	③	④	I found out what concerns or problems the teacher had.
6.	①	②	③	④	I suggested a variety of observational techniques which could be used during the visit.
7.	①	②	③	④	The teacher had input in determining observational strategies and the type of data to be collected.
8.	①	②	③	④	I recorded impressions about the appearance of the classroom.
9.	①	②	③	④	I made verbatim notes of classroom dialogue.
10.	①	②	③	④	I recorded data on the teacher's questions for later analysis.
11.	①	②	③	④	I recorded data on students' responses to teacher's questions.
12.	①	②	③	④	I recorded data on student on-task behavior.
13.	①	②	③	④	I recorded data on the patterns of students' responses.
14.	①	②	③	④	I made audio recordings of the lesson.
15.	①	②	③	④	I recorded data on teacher movement patterns.
16.	①	②	③	④	I recorded data on student movement patterns.
17.	①	②	③	④	I made video recordings of the lessons.
18.	①	②	③	④	I recorded data on the behavior of a specific student.
19.	①	②	③	④	I recorded subjective data on the quality of student/teacher interaction.
20.	①	②	③	④	I remaindd in the classroom for at least 30 minutes when I visited.
21.	①	②	③	④	I examined the teachers' planbook.
22.	①	②	③	④	I specifically checked that the program was in accord with the Alberta Program of Studies.
23.	①	②	③	④	I examined the Record of Student Achievement.
24.	①	②	③	④	I examined student work.
25.	①	②	③	④	I met with the teacher after the observations.
26.	①	②	③	④	I solicited the teacher's analysis of the data.
27.	①	②	③	④	I encouraged the teacher to make inferences and to express feelings and opinions about the observational data.
28.	①	②	③	④	I encouraged the teacher to consider alternative teaching techniques and explanations of classroom events.
29.	①	②	③	④	I listened more than I talked during the post observation conference.
30.	①	②	③	④	I gave praise and encouragement for specific growth in the teacher's teaching skills.
31.	①	②	③	④	I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve.
32.	①	②	③	④	I developed recommendations to assist the teacher improve instruction.
33.	①	②	③	④	I developed recommendations in cooperation with the teacher.
34.	①	②	③	④	I developed a plan of assistance for the teacher as an outcome of the evaluation.
35.	①	②	③	④	I gave the teacher a copy of the evaluation report.
36.	①	②	③	④	The teacher was given the opportunity to respond in writing to the report.
37.	①	②	③	④	The teacher had recourse to a formal appeal procedure if he/she challenged the report.

Listed below are thirty seven statements of strategies or activities commonly used by evaluators in the formal evaluation of teachers. *(A formal evaluation includes a written report containing a recommendation or rating.)*

By checking the appropriate box, please rate each statement with respect to it's importance in a formal evaluation designed to meet DUE PROCESS requirements

	ESSENTIAL (high priority)	DESIRABLE (moderate priority)	ACCEPTABLE (low priority)	NOT ACCEPTABLE	
1.	①	②	③	④	The teacher had a written job description.
2.	①	②	③	④	Standards of performance had been developed for the teacher.
3.	①	②	③	④	I met with the teacher prior to the observation.
4.	①	②	③	④	I found out what the teacher expected the students to be doing during the visit.
5.	①	②	③	④	I found out what concerns or problems the teacher had.
6.	①	②	③	④	I suggested a variety of observational techniques which could be used during the visit.
7.	①	②	③	④	The teacher had input in determining observational strategies and the type of data to be collected.
8.	①	②	③	④	I recorded impressions about the appearance of the classroom.
9.	①	②	③	④	I made verbatim notes of classroom dialogue.
10.	①	②	③	④	I recorded data on the teacher's questions for later analysis.
11.	①	②	③	④	I recorded data on students' responses to teacher's questions.
12.	①	②	③	④	I recorded data on student on-task behavior.
13.	①	②	③	④	I recorded data on the patterns of students' responses.
14.	①	②	③	④	I made audio recordings of the lesson.
15.	①	②	③	④	I recorded data on teacher movement patterns.
16.	①	②	③	④	I recorded data on student movement patterns.
17.	①	②	③	④	I made video recordings of the lessons.
18.	①	②	③	④	I recorded data on the behavior of a specific student.
19.	①	②	③	④	I recorded subjective data on the quality of student/teacher interaction.
20.	①	②	③	④	I remained in the classroom for at least 30 minutes when I visited.
21.	①	②	③	④	I examined the teachers' planbook.
22.	①	②	③	④	I specifically checked that the program was in accord with the Alberta Program of Studies.
23.	①	②	③	④	I examined the Record of Student Achievement.
24.	①	②	③	④	I examined student work.
25.	①	②	③	④	I met with the teacher after the observations.
26.	①	②	③	④	I solicited the teacher's analysis of the data.
27.	①	②	③	④	I encouraged the teacher to make inferences and to express feelings and opinions about the observational data.
28.	①	②	③	④	I encouraged the teacher to consider alternative teaching techniques and explanations of classroom events.
29.	①	②	③	④	I listened more than I talked during the post observation conference.
30.	①	②	③	④	I gave praise and encouragement for specific growth in the teacher's teaching skills.
31.	①	②	③	④	I recommended resources such as books and training programs which dealt with areas in which the teacher wished to improve.
32.	①	②	③	④	I developed recommendations to assist the teacher improve instruction.
33.	①	②	③	④	I developed recommendations in cooperation with the teacher.
34.	①	②	③	④	I developed a plan of assistance for the teacher as an outcome of the evaluation.
35.	①	②	③	④	I gave the teacher a copy of the evaluation report.
36.	①	②	③	④	The teacher was given the opportunity to respond in writing to the report.
37.	①	②	③	④	The teacher had recourse to a formal appeal procedure if he/she challenged the report.

APPENDIX C

LETTERS OF TRANSMITTAL

30 April 1984

Dear Colleague,

Teacher evaluation is upon us !

The recent announcement by the Honourable David King of the Provincial Evaluation Policies has far reaching implications for school jurisdictions and educational administrators.

Given the very natural concerns that arise following the publication of such a policy, it is clear that there is a great need to establish "what is" and "what should be" in the domain of teacher evaluation. To this end we are undertaking a study to document the teacher evaluation practices currently used by administrators, the practices preferred by teachers and the practices necessary to meet minimum due process requirements. It is anticipated that the study will generate useful information for the formulation of sound, fair teacher evaluation practices.

As part of this study we are soliciting your assistance and would ask that you complete and return the attached questionnaire - it takes about 10 minutes to complete. A stamped, addressed envelope is provided.

Individual responses will remain anonymous and confidential and a summary of the research will be disseminated in the fall.

Your assistance in replying as soon as possible is appreciated.

Sincerely,

A. W. Duncan. B.Ed., M.Ed., A.C.P.
Teacher Evaluation Research Project.

30 April 1984

Dear Colleague,

RE: Provincial Evaluation Policies - Teacher Evaluation

Before rushing headlong into hastily conceived schemes, there would seem to be a real need to establish "what is" and "what should be" in the domain of teacher evaluation. To this end the Lakeland School District is sponsoring a study to determine:

(1) Current teacher evaluation practices (including the influence of training and experience on the evaluation strategies)

(2) evaluation practices preferred by teachers

(3) practices necessary to meet minimum "due process" and "improvement of instruction" requirements.

We are soliciting your assistance in two ways; firstly in completing and returning the enclosed questionnaire (it takes about 10 minutes) and secondly through your support of the project by encouraging your administrative staff to respond. - The questionnaire was sent to all Superintendents, and all Assistants listed on the 1983 C.A.S.S. membership roster and a sample of 350 principals from around the Province.

Your assistance is appreciated. Thanks.

Sincerely,

A.N. Duncan, Coordinator
Teacher Evaluation Research Project

AND/pr

ENCL.

LAKELAND PUBLIC SCHOOL DISTRICT NO. 5460

DEPUTY SUPERINTENDENT
MR. W. HAYDUK

POSTAL BAG SERVICE A
BONNYVILLE, ALBERTA T0A 0L0
PHONE: (403) 826-3145

14 May 1984

Dr. R. Heyman, Professor
Dept. of Educational Policy & Admin. Studies
The University of Calgary
2500 University Drive N.W.
CALGARY, Alberta
T2N 1N4

Dear Dr. Heyman,

We are conducting a study into the practices used by administrators in the formal evaluation of teachers and, as a component of that research, are soliciting the assistance of acknowledged experts in delineating essential evaluation strategies.

You were identified by Dr. Oliva, Associate Dean, Faculty of Education, as a person with particular expertise in teacher evaluation and we would be most grateful if you assist us by completing and returning the attached questionnaire - it should take less than ten minutes. A self addressed, reply paid envelope is enclosed.

Your assistance is appreciated.

Thank you.

Sincerely,

A.N. Duncan
Teacher Evaluation Research Project

AND/pr

Attachment

LAKELAND PUBLIC SCHOOL DISTRICT NO. 5460

DEPUTY SUPERINTENDENT
MR. W. [illegible]

POSTAL BAG SERVICE A
BONNYVILLE, ALBERTA T9N [illegible]
PHONE: [illegible]

23 May 1984

Mr. Richard McNally
A.S.T.A.
12310 - 105 Avenue
EDMONTON, Alberta
T5N 0Y4

Dear Mr. McNally,

We are conducting research into the teacher evaluation practices currently in use in Alberta and are soliciting your assistance because of your acknowledged expertise in the domain of Due Process in teacher evaluation.

The attached questionnaire lists thirty eight evaluator activities which are commonly practiced. You are asked to rate each of these activities with respect to Due Process requirements. This will enable us to identify the relative importance of each component of the evaluation procedure should an evaluation ever be challenged in the courts or before a Board of Reference. Your assistance in completing and returning the questionnaire would be greatly appreciated.

Should you have any questions regarding this research please do not hesitate to call me (collect) at 826-3145. Thank you.

Sincerely,

A.N. Duncan B.Ed., M.Ed., A.C.P.
Teacher Evaluation Research Project

AND/pr

Attachment

LAKELAND PUBLIC SCHOOL DISTRICT NO. 5460

SECRETARY - TREASURER
MR. C.B. GAULT

POSTAL BAG SERVICE A
BONNYVILLE, ALBERTA T0A 0L0
PHONE: (403) 826-3145

May 20, 1984

Dear Colleague,

WE NEED YOUR HELP!

With the pressures that administrators face at this time of year and the number of da__ed! *@! questionnaires that cross one's desk, it is probable that you have not had a chance to get to the survey we sent to you three weeks ago, however, we need YOUR help.

In researching "what is" and "what should be" in the domain of teachers evaluation, we are attempting to provide meaningful data for the formulation of sound policy and regulations, and to provide a baseline for assessing the impact of the new Provincial Evaluation Policies. We cannot do this without your help.

Whether or not you have conducted any teacher evaluations, won't you please take a few minutes now to complete and return the enclosed questionnaire. A reply paid envelope is provided.

The results of the study will be disseminated in the fall.

Thanks for you assistance.

Sincerely,

A.N. Duncan
Teacher Evaluation Research Project
ph. 826-3145 (Bus.)
826-6422 (Res.)

LAKELAND SCHOOL DISTRICT # 5460
Postal Bag Service A
Bonnyville, Alberta.
T0A 0L0

18 June 1984

Dear Colleague,

In any research project, the quality or value of the study is dramatically affected by the response rate. It is our hope that we can maximize the value of our study on Teacher Evaluation by achieving as high a response rate as possible from the teachers surveyed.

As of today we have not received a reply from you on the survey we mailed last month, and are writing to ask if you would take a few minutes to complete the attached questionnaire and return it in the enclosed prepaid envelope. We **NEED** your response to make our research meaningful - **PLEASE** complete and return the questionnaire.

The study has the support of the Planning and Research Branch of Alberta Education. The findings will be disseminated in the fall.

PLEASE RETURN THE QUESTIONNAIRE - THANKS

Sincerely,

Andy Duncan
Teacher Evaluation Research Project
ph. 826 3145 (bus)
826 6422 (res)

LAKELAND SCHOOL DISTRICT # 5460
Postal Bag Service A
Bonnyville, Alberta.
T0A 0L0

18 June 1984

Dear Mr.

In any research project, the quality or value of the study is dramatically affected by the response rate. It is our hope that we can maximize the value of our study on Teacher Evaluation by achieving as high a response rate as possible.

As of today we have not received a reply from you on the survey we mailed last month, and are writing to ask if you would take a few minutes to complete the attached questionnaire and return it in the enclosed prepaid envelope. Even if you have not evaluated any teachers this year, or if you are the principal of a one or two room school, we NEED your response - PLEASE complete and return the questionnaire.

The study has the support of the Planning and Research Branch of Alberta Education and of the Conference of Alberta School Superintendents. The findings will be disseminated in the fall.

PLEASE RETURN THE QUESTIONNAIRE - THANKS

Sincerely,

Andy Duncan
Teacher Evaluation Research Project
ph. 826 3145 (bus)
826 6422 (res)

APPENDIX D

STATISTICAL DATA

Key

SUM37 - Score (Number of "yes" responses) on Section 3 of the questionnaire--The Modified Acheson/Shinn Instrument.

PROCESS - Score on the "due process" subset of the Acheson/Shinn items.

IMPRVT - Score on the "Improvement of Instruction" subset.

TEACH - Score on the "Teacher Perception" subset.

Q1 - Section 1 of the questionnaire.

QI - Section 2 of the questionnaire.

QIII - Section 3 of the questionnaire.

Thus QII 8.1 refers to question # 8, part 1, on Section 2 of the questionnaire.

Value labels:

0 - "No" response

1 - "Yes" response

OR: relate to the item bearing that number on the questionnaire. (Q19 and the Multiple Classification Analyses).

```
CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QII8.1

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                             7336.0000     24.3721     4.9961  7488.3256      301
      1                             1006.0000     21.8696     5.1923  1213.2174       46
                                   -------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     5.0221  8701.5430      347

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*              A N A L Y S I S   O F   V A R I A N C E                              *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                           SUM OF                  MEAN
SOURCE                    SQUARES      D.F.       SQUARE          F        SIG.

BETWEEN GROUPS            249.8922        1      249.8922      9.9078     .0018

WITHIN GROUPS            8701.5430      345       25.2219

                   ETA =   .1671    ETA SQUARED =   .0279

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```
CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QII8.2

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                             6404.0000     23.8955     5.2763  7433.0746      268
      1                             1938.0000     24.5316     4.3760  1493.6709       79
                                   -------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     5.0867  8926.7455      347

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*              A N A L Y S I S   O F   V A R I A N C E                              *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                           SUM OF                  MEAN
SOURCE                    SQUARES      D.F.       SQUARE          F        SIG.

BETWEEN GROUPS             24.6896        1       24.6896       .9542     .3293

WITHIN GROUPS            8926.7455      345       25.8746

                   ETA =   .0525    ETA SQUARED =   .0028

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q11B.3

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

   VALUE  LABEL                          SUM         MEAN    STD DEV  SUM OF SQ    CASES

      0                            7910.0000      23.9697     5.1132  8601.6970      330
      1                             432.0000      25.4118     4.4449.  316.1176       17
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000      24.0403     5.0842  8917.8146      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * 
*                    A N A L Y S I S   O F   V A R I A N C E                    *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * 

                         SUM OF                        MEAN
SOURCE                   SQUARES         D.F.         SQUARE          F         SIG.

BETWEEN GROUPS           33.6205           1         33.6205       1.3007     .2549

WITHIN GROUPS          8917 8146         345         25.8487

                  ETA =   .0613    ETA SQUARED =   .0038

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q11B.4

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

   VALUE  LABEL                          SUM         MEAN    STD DEV  SUM OF SQ    CASES

      0                            8147.0000      23.9618     5.0905  8784.5029      340
      1                             195.0000      27.8571     3.2367    62.8571        7
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000      24.0403     5.0640  8847.3601      347


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*                    A N A L Y S I S   O F   V A R I A N C E                    *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * 

                         SUM OF                        MEAN
SOURCE                   SQUARES         D.F.         SQUARE          F         SIG.

BETWEEN GROUPS          104.0751           1        104.0751       4.0584     .0447

WITHIN GROUPS          8847.3601         345         25.6445

                  ETA =   .1078    ETA SQUARED =   .0116

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     Q11B 5

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                      SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                          8078.0000    23.9703     5.1024  8747.7033      337
      1                           264.0000    26.4000     4.0332   146.4000       10
                                 ------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000    24.0403     5.0774  8894.1033      347


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*              A N A L Y S I S   O F   V A R I A N C E                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                 MEAN
SOURCE                   SQUARES       D.F.     SQUARE          F        SIG.

BETWEEN GROUPS           57.3319         1      57.3319      2.2239     .1368

WITHIN GROUPS          8894.1033       345      25.7800

                 ETA =  .0800    ETA SQUARED =  0064
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     Q11B.6

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - - -

    VALUE  LABEL                      SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                          5339.0000    23.3144     5.1612  6073.3624      229
      1                          3003.0000    25.4492     4.6439  2523.1949      118
                                 ------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000    24.0403     4.9917  8596.5574      347


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*              A N A L Y S I S   O F   V A R I A N C E                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                 MEAN
SOURCE                   SQUARES       D.F.     SQUARE          F        SIG.

BETWEEN GROUPS          354.8778         1     354.8778     14.2421     .0002

WITHIN GROUPS          8596.5574       345      24.9176

                 ETA =  .1991    ETA SQUARED =  .0396
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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q118.7

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                            8193.0000     24.0264     5.0657  8724.7625       341
       1                             149.0000     24.8333     6.6758   222.8333         6
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     5.0926  8947.5958       347


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*              A N A L Y S I S   O F   V A R I A N C E                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                        SUM OF                      MEAN
SOURCE                  SQUARES         D.F.        SQUARE          F         SIG.

BETWEEN GROUPS           3.8384           1         3.8384        .1480      .7007

WITHIN GROUPS         8947.5958         345        25.9351

                    ETA =  .0207    ETA SQUARED =  .0004

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q118.8

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                            6819.0000     24.0106     5.2523  7806.9683       284
       1                            1523.000C     24.1746     4.2938  1143.0794        63
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     5.0933  8950.0477       347


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*              A N A L Y S I S   O F   V A R I A N C E                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                        SUM OF                      MEAN
SOURCE                  SQUARES         D.F.        SQUARE          F         SIG.

BETWEEN GROUPS           1.3875           1         1.3875        .0535      .8172

WITHIN GROUPS         8950.0477         345        25.9422

                    ETA =  .0124    ETA SQUARED =  .0002

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QII8.9

- -  - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                       SUM        MEAN     STD DEV  SUM OF SQ     CASES

        0                        7623.0000     23.9717      5.0282  8014.7453       318
        1                         719.0000     24.7931      5.7282   918.7586        29
                                 -----------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403      5.0886  8933.5039       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

*                A N A L Y S I S   O F   V A R I A N C E                          *

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                            SUM OF                     MEAN
SOURCE                     SQUARES       D.F.        SQUARE           F        SIG.

BETWEEN GROUPS             17.9313          1       17.9313       .6925       .4059

WITHIN GROUPS            8933.5039        345       25.8942

                   ETA =   .0448    ETA SQUARED =   .0020

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QII8.10

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - - -

    VALUE  LABEL                       SUM        MEAN     STD DEV  SUM OF SQ     CASES

        0                        7123.0000     24.2279      5.1116  7655.7313       294
        1                        1219.0000     23.0000      4.8596  1228.0000        53
                                 -----------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403      5.0744  8883.7313       347


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*                A N A L Y S I S   O F   V A R I A N C E                          *

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                            SUM OF                     MEAN
SOURCE                     SQUARES       D.F.        SQUARE           F        SIG.

BETWEEN GROUPS             67.7039          1       67.7039      2.6293       .1058

WITHIN GROUPS            8883.7313        345       25.7499

                   ETA =   .0870    ETA SQUARED =   .0076

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII9.1

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                         SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                            7844.0000     23.9878     5.0616  8351.9511       327
      1                             498.0000     24.9000     5.5431   583.8000        20
                                  ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     5.0893  8935.7511       347


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*                 A N A L Y S I S   O F   V A R I A N C E                      *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                              SUM OF                   MEAN
SOURCE                       SQUARES       D.F.       SQUARE          F       SIG.

BETWEEN GROUPS               15.6841          1      15.6841      .6055      .4370

WITHIN GROUPS              8935.7511        345      25.9007

                      ETA =  .0419    ETA SQUARED =  .0018

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII9.2

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                         SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                            2315.0000     23.1500     5.8558  3394.7500       100
      1                            6027.0000     24.4008     4.7048  5445.3198       247
                                  ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     5.0620  8840.0698       347


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*                 A N A L Y S I S   O F   V A R I A N C E                      *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                              SUM OF                   MEAN
SOURCE                       SQUARES       D.F.       SQUARE          F       SIG.

BETWEEN GROUPS              111.3653          1     111.3653     4.3462      .0378

WITHIN GROUPS              8840.0698        345      25.6234

                      ETA =  .1115    ETA SQUARED =  .0124

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII9 3

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                           SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                              7700.0000    23.9130     5.0860  8303.5652       322
       1                               642.0000    25.6800     4.8966   575.4400        25
                                      ---------------------------------------------------
WITHIN GROUPS TOTAL                   8342.0000    24.0403     5.0731  8879.0052       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                        *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                    MEAN
SOURCE                      SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS                72.4299         1        72.4299    2.8143     .0843

WITHIN GROUPS               8879.0052       345        25.7362

                      ETA =  0900    ETA SQUARED =  0081

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII9.4

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                           SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                              7637.0000    24.0157     5.0314  8024.9214       318
       1                               705.0000    24.3103     5.7452   924.2069        29
                                      ---------------------------------------------------
WITHIN GROUPS TOTAL                   8342.0000    24.0403     5.0931  8949.1283       347


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*                A N A L Y S I S   O F   V A R I A N C E                        *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                    MEAN
SOURCE                      SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS                 2.3069         1         2.3069     .0889     .7657

WITHIN GROUPS               8949.1283       345        25.9395

                      ETA =  .0161   ETA SQUARED =  .0003

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q119.5

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - - - -

     VALUE  LABEL                          SUM        MEAN     STD DEV  SUM OF SQ     CASES

         0                           7178.0000     24.2500     5.1917  7951.5000       296
         1                           1164.0000     22.8235     4.2695   911.4118        51
                                   -----------------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     5.0685  8862.9118       347


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*               A N A L Y S I S   O F   V A R I A N C E                       *

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                         SUM OF                      MEAN
SOURCE                   SQUARES        D.F.        SQUARE          F        SIG.

BETWEEN GROUPS           88.5234           1        88.5234     3.4459     .0643

WITHIN GROUPS          8862.9118         345        25.6896

                   ETA =  .0994    ETA SQUARED =  .0099

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    Q119.6

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - - - - -

     VALUE  LABEL                          SUM        MEAN     STD DEV  SUM OF SQ     CASES

         0                           7949.0000     24.0879     5.1099  8590.4515       330
         1                            393.0000     23.1176     4.6487   345.7647        17
                                   -----------------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     5.0894  8936.2162       347


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*               A N A L Y S I S   O F   V A R I A N C E                       *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                      MEAN
SOURCE                   SQUARES        D.F.        SQUARE          F        SIG.

BETWEEN GROUPS           15.2189           1        15.2189      .5876     .4439

WITHIN GROUPS          8936.2162         345        25.9021

                   ETA =  .0412    ETA SQUARED =  .0017

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.1

- - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

     VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                           7203.0000     24.4169     4.9938  7331.7153       295
       1                           1139.0000     21.9038     5.1269  1340.5192        52
                                   ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     5.0137  8672.2345       347


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 *              A N A L Y S I S   O F   V A R I A N C E                        *

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                           SUM OF                    MEAN
 SOURCE                    SQUARES        D.F.      SQUARE           F       SIG.

 BETWEEN GROUPS            279.2007          1     279.2007    11.1073      .0010

 WITHIN GROUPS            8672.2345        345      25.1369

                       ETA =  .1766    ETA SQUARED =  .0312

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.2

- - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

     VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ     CASES

       0                           6733.0000     23.9609     5.1722  7490.5694       281
       1                           1609.0000     24.3788     4.7256  1451.5303        66
                                   ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     5.0911  8942.0997       347


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 *              A N A L Y S I S   O F   V A R I A N C E                        *

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                           SUM OF                    MEAN
 SOURCE                    SQUARES        D.F.      SQUARE           F       SIG.

 BETWEEN GROUPS              9.3355          1       9.3355      .3602      .5488

 WITHIN GROUPS            8942.0997        345      25.9191

                       ETA =  .0323    ETA SQUARED =  .0010

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.3

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - - -
    VALUE  LABEL                          SUM         MEAN    STD DEV  SUM OF SQ     CASES

       0                            7818.0000      23.9816     5.1231  8529.8896       326
       1                             524.0000      24.9524     4.4886 ,  402.9524       21
                                   ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000      24.0403     5.0884  8932.8420       347


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*                A N A L Y S I S   O F   V A R I A N C E                       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                               SUM OF                      MEAN
SOURCE                        SQUARES         D.F.        SQUARE          F        SIG.

BETWEEN GROUPS                18.5932            1       18.5932      .7181       .3974

WITHIN GROUPS               8932.8420          345       25.8923

                        ETA =  .0456    ETA SQUARED =   .0021
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.4

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - - - -
    VALUE  LABEL                          SUM         MEAN    STD DEV  SUM OF SQ     CASES

       0                            8158.0000      23.9941     5.0758  8733.9882       340
       1                             184.0000      26.2857     5.4989   181.4286         7
                                   ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000      24.0403     5.0835  8915.4168       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                       *
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                               SUM OF                      MEAN
SOURCE                        SQUARES         D.F.        SQUARE          F        SIG.

BETWEEN GROUPS                36.0184            1       36.0184     1.3938       .2386

WITHIN GROUPS               8915.4168          345       25.8418

                        ETA =  .0634    ETA SQUARED =   .0040
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```
CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII10.5

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                     SUM          MEAN     STD DEV   SUM OF SQ    CASES

       0                        3969.0000      24.2012      5.5740   5064.3598      164
       1                        4373.0000      23.8962      4.6166   3879.0273      183
                               ---------------------------------------------------------
WITHIN GROUPS TOTAL             8342.0000      24.0403      5.0914   8943.3871      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                   MEAN
SOURCE                   SQUARES        D.F.      SQUARE          F        SIG.

BETWEEN GROUPS            8.0481          1       8.0481        .3105     .5778

WITHIN GROUPS          8943.3871        345      25.9229

                      ETA =  .0300   ETA SQUARED =  .0009
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *



CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII10.6

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                     SUM          MEAN     STD DEV   SUM OF SQ    CASES

       0                        7142.0000      23.5710      5.0852   7748.2244      303
       1                        1200.0000      27.2727      3.9671    676.7273       44
                               ---------------------------------------------------------
WITHIN GROUPS TOTAL             8342.0000      24.0403      4.9417   8424.9517      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                   MEAN
SOURCE                   SQUARES        D.F.      SQUARE          F        SIG.

BETWEEN GROUPS          526.4835          1     526.4835      21.5594     .0000

WITHIN GROUPS          8424.9517        345      24.4201

                      ETA =  .2425   ETA SQUARED =  .0588
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.7

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                       SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                          7846.0000     23.9939     5.1344  8593.9878       327
      1                           496.0000     24.8000     4.2624   345.2000        20
                                 ----------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403     5.0903  8939.1878       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                 A N A L Y S I S   O F   V A R I A N C E                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                   MEAN
SOURCE                    SQUARES       D.F.       SQUARE          F       SIG.

BETWEEN GROUPS            12.2474         1        12.2474      .4727     .4922

WITHIN GROUPS           8939.1878       345        25.9107

                   ETA =  .0370    ETA SQUARED =   .0014

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QII10.8

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                       SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                          8257.0000     24.0029     5.0890  8882.9971       344
      1                            85.0000     28.3333     2.5166    12.6667         3
                                 ----------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403     5.0778  8895.6638       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                 A N A L Y S I S   O F   V A R I A N C E                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                   MEAN
SOURCE                    SQUARES       D.F.       SQUARE          F       SIG.

BETWEEN GROUPS            55.7714         1        55.7714     2.1630     .1423

WITHIN GROUPS           8895.6638       345        25.7845

                   ETA =  .0789    ETA SQUARED =   .0062

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QII10.9

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

     VALUE  LABEL                            SUM        MEAN    STD DEV  SUM OF SQ    CASES

        0                              7363.0000     23.9837     5.0846  7910.9186      307
        1                               979.0000     24.4750     5.1440  1031.9750       40
                                      ------------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     5.0913  8942.8936      347


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*              A N A L Y S I S   O F   V A R I A N C E                          *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                     SQUARES      D.F.        SQUARE          F        SIG.

BETWEEN GROUPS              8.5416         1        8.5416       .3295      .5663

WITHIN GROUPS            8942.8936       345       25.9214

                    ETA =  .0309   ETA SQUARED =  .0010

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII1

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

     VALUE  LABEL                            SUM        MEAN    STD DEV  SUM OF SQ    CASES

        0                              4553.0000     22.8794     5.2287  5413.1055      199
        1                              3789.0000     25.6014     4.4489  2909.4797      148
                                      ------------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     4.9116  8322.5853      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*              A N A L Y S I S   O F   V A R I A N C E                          *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                     SQUARES      D.F.        SQUARE          F        SIG.

BETWEEN GROUPS            628.8499         1      628.8499     26.0680      .0000

WITHIN GROUPS            8322.5853       345       24.1234

                    ETA =  .2650   ETA SQUARED =  .0703

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII2

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                             3144.0000     22.1408     5.4922  4253.1831      142
      1                             5198.0000     25.3561     4.3335  3831.0049      205
                                   ---------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     4.8407  8084.1880      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

*               A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                    MEAN
SOURCE                     SQUARES       D.F.        SQUARE          F       SIG.

BETWEEN GROUPS             867.2472         1      867.2472    37.0106     .0000

WITHIN GROUPS             8084.1880       345       23.4324

                      ETA =  .3113    ETA SQUARED =  .0969

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII3

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                             1655.0000     20.9494     5.9397  2751.7975       79
      1                             6687.0000     24.9515     4.4226  5222.3694      268
                                   ---------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403     4.8077  7974.1669      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

*               A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                    MEAN
SOURCE                     SQUARES       D.F.        SQUARE          F       SIG.

BETWEEN GROUPS             977.2683         1      977.2683    42.2812     .0000

WITHIN GROUPS             7974.1669       345       23.1135

                      ETA =  .3304    ETA SQUARED =  .1092

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII4

. . . . . . .  . . . . . . . . . . . . .   A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                          SUM         MEAN     STD DEV  SUM OF SQ     CASES

      0                              1321.0000     21.3065     6.6937  2733.1774        62
      1                              7021.0000     24.6351     4.4619  5654.0491       285
                                    -----------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     4.9306  8387.2265       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                     MEAN
SOURCE                    SQUARES       D.F.        SQUARE          F          SIG.

BETWEEN GROUPS            564.2086        1        564.2086      23.2081      .0000

WITHIN GROUPS            8387.2265      345         24.3108

                   ETA =  .2511    ETA SQUARED =  .0630

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII5

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM         MEAN     STD DEV  SUM OF SQ     CASES

      0                              1039.0000     20.3725     6.4186  2059.9216        51
      1                              7303.0000     24.6723     4.5425  6087.2128       296
                                    -----------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     4.8595  8147.1344       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                          SUM OF                     MEAN
SOURCE                    SQUARES       D.F.        SQUARE          F          SIG.

BETWEEN GROUPS            804.3008        1        804.3008      34.0581      .0000

WITHIN GROUPS            8147.1344      345         23.6149

                   ETA =  .2998    ETA SQUARED =  .0899

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII6

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                          SUM       MEAN    STD DEV  SUM OF SQ    CASES

        0                           5168.0000    22.4696     4.9147  5531.2870      230
        1                           3174.0000    27.1282     3.8697  1737.0769      117
                                    ---------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000    24.0403     4.5800  7268.3639      347


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*                A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                           SUM OF                     MEAN
SOURCE                     SQUARES        D.F.        SQUARE          F        SIG.

BETWEEN GROUPS            1683.0713         1       1683.0713     79.8886     .0000

WITHIN GROUPS             7268.3639       345         21.0677

                    ETA =  .4336    ETA SQUARED =  .1880

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII7

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM       MEAN    STD DEV  SUM OF SQ    CASES

        0                           5082.0000    22.5867     5.0465  5704.5600      225
        1                           3260.0000    26.7213     3.9569  1894.5246      122
                                    ---------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000    24.0403     4.6932  7599.0846      347


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*                A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                           SUM OF                     MEAN
SOURCE                     SQUARES        D.F.        SQUARE          F        SIG.

BETWEEN GROUPS            1352.3506         1       1352.3506     61.3970     .0000

WITHIN GROUPS             7599.0846       345         22.0263

                    ETA =  .3887    ETA SQUARED =  .1511

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII8

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                      SUM         MEAN     STD DEV   SUM OF SQ     CASES

       0                          812.0000     20.8205      7.1667   1951.7436        39
       1                         7530.0000     24.4481      4.6170   6544.1688       308
                              --------------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403      4.9624   8495.9124       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*             A N A L Y S I S   O F   V A R I A N C E                          *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                    MEAN
SOURCE                  SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS          455.5227          1      455.5227    18.4976      .0000

WITHIN GROUPS          8495.9124        345       24.6258

                 ETA =  .2256   ETA SQUARED =  .0509

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII9

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                      SUM         MEAN     STD DEV   SUM OF SQ     CASES

       0                         3309.0000     22.0600      5.3360   4242.4800       150
       1                         5033.0000     25.5482      4.3288   3672.7718       197
                              --------------------------------------------------------
WITHIN GROUPS TOTAL              8342.0000     24.0403      4.7899   7915.2518       347


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*             A N A L Y S I S   O F   V A R I A N C E                          *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                    MEAN
SOURCE                  SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS         1036.1833          1     1036.1833    45 [illegible]      .0000

WITHIN GROUPS          7915.2518        345       22.9428

                 ETA =  .3402   ETA SQUARED =  .1158

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII10

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                             SUM        MEAN    STD DEV  SUM OF SQ    CASES

        0                              2467.0000     20.7311     4.8933  2825.3950      119
        1                              5875.0000     25.7675     4.2720  4142.6798      228
                                       ---------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     4.4941  6968.0748      347


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*                ANALYSIS   OF   VARIANCE                                       *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                     SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS            1983.3604         1    1983.3604     98.1993     .0000

WITHIN GROUPS             6968.0748       345      20.1973

                  ETA =   .4707    ETA SQUARED =   .2216

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII11

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                             SUM        MEAN    STD DEV  SUM OF SQ    CASES

        0                              2369.0000     20.9646     4.8861  2673.8584      113
        1                              5973.0000     25.5256     4.4876  4692.3462      234
                                       ---------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     4.6207  7366.2046      347


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*                ANALYSIS   OF   VARIANCE                                       *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                     SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS            1585.2306         1    1585.2306     74.2451     .0000

WITHIN GROUPS             7366.2046       345      21.3513

                  ETA =   .4208    ETA SQUARED =   .1771

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII12

- - - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                              SUM        MEAN     STD DEV  SUM OF SQ     CASES

        0                                888.0000     19.7333      6.2719  1730.8000        45
        1                               7454.0000     24.6821      4.5610  6261.4834       302
                                      ----------------------------------------------------------
WITHIN GROUPS TOTAL                     8342.0000     24.0403      4.8131  7992.2834       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                A N A L Y S I S   O F   V A R I A N C E                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                      SQUARES        D.F.      SQUARE          F         SIG.

BETWEEN GROUPS             959.1517          1      959.1517     41.4034      .0000

WITHIN GROUPS             7992.2834        345       23.1660

                    ETA =  .3273    ETA SQUARED =  .1072

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII13

- - - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                              SUM        MEAN     STD DEV  SUM OF SQ     CASES

        0                               3645.0000     21.6964      4.9011  4011.5179       168
        1                               4697.0000     26.2402      4.2072  3150.6704       179
                                      ----------------------------------------------------------
WITHIN GROUPS TOTAL                     8342.0000     24.0403      4.5563  7162.1882       347


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*                A N A L Y S I S   O F   V A R I A N C E                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                            SUM OF                   MEAN
SOURCE                      SQUARES        D.F.      SQUARE          F         SIG.

BETWEEN GROUPS            1789.2469          1     1789.2469     86.1874      .0000

WITHIN GROUPS             7162.1882        345       20.7600

                    ETA =  .4471    ETA SQUARED =  .1999

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    OIII14

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - -

     VALUE  LABEL                              SUM        MEAN     STD DEV  SUM OF SQ     CASES

       0                                 8182.0000     23.9941      5.0927  8817.9883       341
       1                                  160.0000     26.6667      4.2740    91.3333         6
                                       ----------------------------------------------------------
WITHIN GROUPS TOTAL                      8342.0000     24.0403      5.0817  8909.3216       347


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*                A N A L Y S I S   O F   V A R I A N C E                         *

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                             SUM OF                      MEAN
SOURCE                       SQUARES         D.F.        SQUARE           F          SIG.

BETWEEN GROUPS                 42.1136          1          42.1136      1.6308      .2025

WITHIN GROUPS                8909.3216        345          25.8241

                      ETA =   .0686    ETA SQUARED =   .0047

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    OIII15

- - - - - - - - - - - - - - - - - - - - -   A N A L Y S I S   O F   V A R I A N C E   - - - - - -

     VALUE  LABEL                              SUM        MEAN     STD DEV  SUM OF SQ     CASES

       0                                 4041.0000     21.7258      4.7812  4229.0161       186
       1                                 4301.0000     26.7143      4.0116  2574.8571       161
                                       ----------------------------------------------------------
WITHIN GROUPS TOTAL                      8342.0000     24.0403      4.4409  6803.8733       347


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*                A N A L Y S I S   O F   V A R I A N C E                         *

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                             SUM OF                      MEAN
SOURCE                       SQUARES         D.F.        SQUARE           F          SIG.

BETWEEN GROUPS               2147.5619          1        2147.5619    108.8952      .0000

WITHIN GROUPS                6803.8733        345          19.7214

                      ETA =   .4898    ETA SQUARED =   .2399

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII16

 - - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                          SUM        MEAN     STD DEV  SUM OF SQ    CASES

       0                            4190.0000     22.1693      4.9274  4564.5820      189
       1                            4152.0000     26.2785      4.3226  2933.7466      158
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403      4.6620  7498.3286      347


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 *                A N A L Y S I S   O F   V A R I A N C E                        *
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                            SUM OF                     MEAN
 SOURCE                     SQUARES        D.F.        SQUARE         F        SIG.

 BETWEEN GROUPS            1453.1063          1     1453.1063    66.8578      .0000

 WITHIN GROUPS             7498.3286        345       21.7343

                     ETA =  .4029   ETA SQUARED =   .1623

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII17

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    VALUE  LABEL                          SUM        MEAN     STD DEV  SUM OF SQ    CASES

       0                            8310.0000     24.0173      5.0756  8887.8860      346
       1                              32.0000     32.0000       .0000      .0000        1
                                  ---------------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000     24.0403      5.0756  8887.8860      347


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 *                A N A L Y S I S   O F   V A R I A N C E                        *
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                            SUM OF                     MEAN
 SOURCE                     SQUARES        D.F.        SQUARE         F        SIG.

 BETWEEN GROUPS              63.5392          1       63.5392     2.4664      .1172

 WITHIN GROUPS             8887.8860        345       25.7620

                     ETA =  .0843   ETA SQUARED =   .0071

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII18

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

   VALUE  LABEL                     SUM        MEAN     STD DEV   SUM OF SQ      CASES

     0                         3856.0000     22.5497     5.3028   4780.3275        171
     1                         4486.0000     25.4886     4.4220   3421.9773        176
                              ---------------------------------------------------------
WITHIN GROUPS TOTAL            8342.0000     24.0403     4.8759   8202.3048        347


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*                ANALYSIS OF VARIANCE                                       *

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                           SUM OF                    MEAN
SOURCE                    SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS           749.1304          1       749.1304    31.5094     .0000

WITHIN GROUPS           8202 3048        345        23.7748

                  ETA =  2893    ETA SQUARED =  .0837

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII19

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

   VALUE  LABEL                     SUM        MEAN     STD DEV   SUM OF SQ      CASES

     0                          733.0000     19.8108     7.1680   1849.6757         37
     1                         7609.0000     24.5452     4.5371   6360.8677        310
                              ---------------------------------------------------------
WITHIN GROUPS TOTAL            8342.0000     24.0403     4.8784   8210.5434        347


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*                ANALYSIS OF VARIANCE                                       *

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                           SUM OF                    MEAN
SOURCE                    SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS           740.8917          1       740.8917    31.1316     .0000

WITHIN GROUPS           8210.5434        345        23.7987

                  ETA =  .2877    ETA SQUARED =  .0828

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    OIII20

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                         SUM        MEAN    STD DEV  SUM OF SQ     CASES

        0                           296.0000     18.5000     8.3825  1054.0000        16
        1                          8046.0000     24.3082     4.7298  7382.5680       331
                                   -------------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     4.9451  8436.5680       347


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*                  A N A L Y S I S   O F   V A R I A N C E                       *
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                           SUM OF                   MEAN
SOURCE                     SQUARES      D.F.       SQUARE          F        SIG.

BETWEEN GROUPS             514.8672        1      514.8672     21.0547     .0000

WITHIN GROUPS             8436.5680      345       24.4538

                      ETA =  .2398   ETA SQUARED =  .0575

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    OIII21

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                         SUM        MEAN    STD DEV  SUM OF SQ     CASES

        0                          1322.0000     20.9841     6.0335  2256.9841        63
        1                          7020.0000     24.7183     4.5951  5975.4648       284
                                   -------------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000     24.0403     4.8849  8232.4489       347


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*                  A N A L Y S I S   O F   V A R I A N C E                       *
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                           SUM OF                   MEAN
SOURCE                     SQUARES      D.F.       SQUARE          F        SIG.

BETWEEN GROUPS             718.9862        1      718.9862     30.1308     .0000

WITHIN GROUPS             8232.4489      345       23.8622

                      ETA =  .2834   ETA SQUARED =  .0803

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QIII22

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                              SUM         MEAN    STD DEV  SUM OF SQ     CASES

      0                                 2563.0000      21.7203     5.6051  3675.7712       118
      1                                 5779.0000      25.2358     4.3495  4313.2664       229
                                       ----------------------------------------------------
WITHIN GROUPS TOTAL                     8342.0000      24.0403     4.8121  7989.0376       347


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*                A N A L Y S I S   O F   V A R I A N C E                     * *

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                           SUM OF                      MEAN
SOURCE                     SQUARES         D.F.        SQUARE          F         SIG.

BETWEEN GROUPS            962.3976           1       962.3976    41.5603      .0000

WITHIN GROUPS            7989.0376         345        23.1566

                     ETA =   .3279    ETA SQUARED =   .1075

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CRITERION VARIABLE   SUM37
   BROKEN DOWN BY    QIII23

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    VALUE  LABEL                              SUM         MEAN    STD DEV  SUM OF SQ     CASES

      0                                 2963.0000      22.1119     5.5178  4049.3209       134
      1                                 5379.0000      25.2535     4.3925  4090.3099       213
                                       ----------------------------------------------------
WITHIN GROUPS TOTAL                     8342.0000      24.0403     4.8573  8139.6308       347


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*                A N A L Y S I S   O F   V A R I A N C E                       *

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                           SUM OF                      MEAN
SOURCE                     SQUARES         D.F.        SQUARE          F         SIG.

BETWEEN GROUPS            811.8044           1       811.8044    34.4085      .0000

WITHIN GROUPS            8139.6308         345        23.5931

                     ETA =   .3011    ETA SQUARED =   .0907

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII24

- - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ    CASES

       0                            803.0000    21.7027     7.1253  1827.7297       37
       1                           7539.0000    24.3194     4.7246  6897.3839      310
                                 ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000    24.0403     5.0289  8725.1136      347


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*                A N A L Y S I S   O F   V A R I A N C E                         *

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                          SUM OF                   MEAN
SOURCE                    SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS            226.3216        1       226.3216      8.9490     .0030

WITHIN GROUPS            8725.1136      345        25.2902

                    ETA =  .1590    ETA SQUARED =  .0253

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CRITERION VARIABLE    SUM37
    BROKEN DOWN BY    QIII25

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ    CASES

       0                             67.0000    11.1667     9.4745   448.8333        6
       1                           8275.0000    24.2669     4.6938  7490.7155      341
                                 ----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000    24.0403     4.7972  7939.5488      347


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*                A N A L Y S I S   O F   V A R I A N C E                         *

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                          SUM OF                   MEAN
SOURCE                    SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS           1011.8863        1      1011.8863     43.9698     .0000

WITHIN GROUPS            7939.5488      345        23.0132

                    ETA =  .3362    ETA SQUARED =  .1130

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII26

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                           SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                              1438.0000     19.6986     5.2670  1997.3699       73
      1                              6904.0000     25.1971     4.3691  5211.3577      274
                                     ------------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     4.5711  7208.7275      347


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*              A N A L Y S I S   O F   V A R I A N C E                          *

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                          SUM OF                  MEAN
SOURCE                   SQUARES       D.F.      SQUARE          F       SIG.

BETWEEN GROUPS         1742.7076         1    1742.7076    83.4036     .0000

WITHIN GROUPS          7208.7275       345      20.8949

                  ETA =  .4412    ETA SQUARED =  .1947

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII27

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                           SUM        MEAN    STD DEV  SUM OF SQ    CASES

      0                               870.0000     19.3333     6.0566  1614.0000       45
      1                              7472.0000     24.7417     4.5355  6191.8543      302
                                     ------------------------------------------------------
WITHIN GROUPS TOTAL                  8342.0000     24.0403     4.7566  7805.8543      347


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*              A N A L Y S I S   O F   V A R I A N C E                          *

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                          SUM OF                  MEAN
SOURCE                   SQUARES       D.F.      SQUARE          F       SIG.

BETWEEN GROUPS         1145.5809         1    1145.5809    50.6319     .0000

WITHIN GROUPS          7805.8543       345      22.6257

                  ETA =  .3577    ETA SQUARED =  .1280

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII28

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     VALUE  LABEL                            SUM        MEAN      STD DEV  SUM OF SQ     CASES

       0                               2107.0000     20.6569     5.3584  2900.9902      102
       1                               6235.0000     25.4490     4.2449  4396.6122      245
                                     ------------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     4.5992  7297.6024      347

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.              A N A L Y S I S   O F   V A R I A N C E                          .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

SOURCE                      SUM OF                     MEAN
                            SQUARES        D.F.        SQUARE          F          SIG.

BETWEEN GROUPS             1653.8327         1       1653.8327     78.1863      .0000

WITHIN GROUPS              7297.6024       345         21.1525

                      ETA =   .4298    ETA SQUARED =   .1848
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII29

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -
     VALUE  LABEL                            SUM        MEAN      STD DEV  SUM OF SQ     CASES

       0                               4883.0000     23.0330     5.2143  5736.7688      212
       1                               3459.0000     25.6222     4.4569  2661.7333      135
                                     ------------------------------------------------------
WITHIN GROUPS TOTAL                    8342.0000     24.0403     4.9339  8398.5022      347

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.              A N A L Y S I S   O F   V A R I A N C E                          .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

SOURCE                      SUM OF                     MEAN
                            SQUARES        D.F.        SQUARE          F          SIG.

BETWEEN GROUPS              552.8330         1        552.8330     22.7138      .0000

WITHIN GROUPS              8398.5022       345         24.3435

                      ETA =   .2485    ETA SQUARED =   .0618
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII30

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                          SUM       MEAN    STD DEV  SUM OF SQ    CASES

      0                              568.0000    20.2857     7.1277  1371.7143       28
      1                             7774.0000    24.3699     4.7419  7150.3511      319
                                   ----------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000    24.0403     4.9701  8522.0654      347


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*                A N A L Y S I S   O F   V A R I A N C E                       *

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                          SUM OF                   MEAN
SOURCE                   SQUARES        D.F.      SQUARE          F        SIG.

BETWEEN GROUPS          429.3698          1     429.3698    17.3822     .0000

WITHIN GROUPS          8522.0654        345      24.7016

                     ETA =  .2190    ETA SQUARED =  .0480

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII31

- - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                          SUM       MEAN    STD DEV  SUM OF SQ    CASES

      0                             4619.0000    22.3140     4.8814  4908.5884      207
      1                             3723.0000    26.5929     4.2526  2513.7929      140
                                   ----------------------------------------------------
WITHIN GROUPS TOTAL                 8342.0000    24.0403     4.6383  7422.3822      347


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*                A N A L Y S I S   O F   V A R I A N C E                       *

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                          SUM OF                   MEAN
SOURCE                   SQUARES        D.F.      SQUARE          F        SIG.

BETWEEN GROUPS         1529.0529          1    1529.0529    71.0720     .0000

WITHIN GROUPS          7422.3822        345      21.5142

                     ETA =  .4133    ETA SQUARED =  .1708

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII32

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                           1878.0000     20.6374     5.2968  2525.0330        91
      1                           6464.0000     25.2500     4.4272  4998.0000       256
                                  -----------------------------------------------------
WITHIN GROUPS TOTAL               8342.0000     24.0403     4.6697  7523.0330       347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

*               A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                              SUM OF                    MEAN
SOURCE                       SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS              1428.4022          1    1428.4022    65.5053      .0000

WITHIN GROUPS               7523.0330        345      21.8059

                       ETA =  .3995    ETA SQUARED =  .1596

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   QIII33

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - -

    VALUE  LABEL                        SUM        MEAN    STD DEV  SUM OF SQ     CASES

      0                           2853.0000     20.8248     4.9317  3307.7956       137
      1                           5489.0000     26.1381     3.9754  3302.9952       210
                                  -----------------------------------------------------
WITHIN GROUPS TOTAL               8342.0000     24.0403     4.3774  6610.7909       347


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*               A N A L Y S I S   O F   V A R I A N C E                        *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                              SUM OF                    MEAN
SOURCE                       SQUARES        D.F.       SQUARE          F        SIG.

BETWEEN GROUPS              2340.6443          1    2340.6443   122.1521      .0000

WITHIN GROUPS               6610.7908        345      19.1617

                       ETA =  .5114    ETA SQUARED =  .2615

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII34

- - - - -  - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

    VALUE  LABEL                        SUM       MEAN    STD DEV  SUM OF SQ    CASES

        0                          4910.0000   22.1171    4.7608  5008.9550      222
        1                          3432.0000   27.4560    3.6622  1663.0080      125
                                   -----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000   24.0403    4.3976  6671.9630      347


* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

*                  A N A L Y S I S   O F   V A R I A N C E                     *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                   MEAN
SOURCE                   SQUARES      D.F.       SQUARE          F         SIG.

BETWEEN GROUPS          2279.4722       1       2279.4722   117.8690      .0000

WITHIN GROUPS           6671.9630     345         19.3390

                   ETA =   .5046   ETA SQUARED =   .2546

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CRITERION VARIABLE    SUM37
   BROKEN DOWN BY     QIII35

- - - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - - -

    VALUE  LABEL                        SUM       MEAN    STD DEV  SUM OF SQ    CASES

        0                           307.0000   18.0588    7.4538   888.9412       17
        1                          8035.0000   24.3485    4.7500  7422.9242      330
                                   -----------------------------------------------------
WITHIN GROUPS TOTAL                8342.0000   24.0403    4.9084  8311.8654      347


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*                  A N A L Y S I S   O F   V A R I A N C E                     *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                         SUM OF                   MEAN
SOURCE                   SQUARES      D.F.       SQUARE          F         SIG.

BETWEEN GROUPS           639.5697       1        639.5697    26.5466      .0000

WITHIN GROUPS           8311.8654     345         24.0924

                   ETA =   .2673   ETA SQUARED =   .0714

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   OIII36

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                            SUM         MEAN     STD DEV  SUM OF SQ     CASES

        0                              973.0000      19.8571      5.6199  1516.0000        49
        1                             7369.0000      24.7282      4.6555  6436.9832       298
                                  ----------------------------------------------------------
WITHIN GROUPS TOTAL                   8342.0000      24.0403      4.8013  7952.9832       347


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*                A N A L Y S I S   O F   V A R I A N C E                       *

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                           SUM OF                   MEAN
SOURCE                     SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS             998.4519        1        998.4519     43.3128    .0000

WITHIN GROUPS             7952.9832      345         23.0521

                    ETA =  .3340   ETA SQUARED =   .1115

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   OIII37

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - -

    VALUE  LABEL                            SUM         MEAN     STD DEV  SUM OF SQ     CASES

        0                              974.0000      20.2917      5.5350  1439.9167        48
        1                             7368.0000      24.6421      4.7518  6728.7090       299
                                  ----------------------------------------------------------
WITHIN GROUPS TOTAL                   8342.0000      24.0403      4.8659  8168.6257       347


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*                A N A L Y S I S   O F   V A R I A N C E                       *

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                           SUM OF                   MEAN
SOURCE                     SQUARES       D.F.       SQUARE          F        SIG.

BETWEEN GROUPS             782.8095        1        782.8095     33.0618    .0000

WITHIN GROUPS             8168.6257      345         23.6772

                    ETA =  .2957   ETA SQUARED =   .0875

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CRITERION VARIABLE   SUM37
    BROKEN DOWN BY   Q19

- - - - - - - - - - - - - - - - - - - - - -  A N A L Y S I S   O F   V A R I A N C E  - - - - -

     VALUE  LABEL                       SUM        MEAN    STD DEV  SUM OF SQ    CASES

         1                        7323.0000     24.2483     5.1812  8080.3742      302
         2                         857.0000     22.5526     4.5184   755.3947       38
         3                         141.0000     23.5000     1.2247     7.5000        6
                                 ----------------------------------------------------
WITHIN GROUPS TOTAL               8321.0000     24.0491     5.0776  8843.2689      346


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*                A N A L Y S I S   O F   V A R I A N C E                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

                              SUM OF                  MEAN
SOURCE                       SQUARES        D.F      SQUARE           F        SIG.

BETWEEN GROUPS               98.8958          2     49.4479      1.9179      .1485

WITHIN GROUPS              8843.2689        343     25.7821

                  ETA =   .1052    ETA SQUARED =   .0111

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* * *  M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S  * * *

             SUM37
        BY   QI1
             QII1

GRAND MEAN =    24.19                                                  ADJUSTED FOR
                                                        ADJUSTED FOR   INDEPENDENTS
                                           UNADJUSTED   INDEPENDENTS   + COVARIATES
VARIABLE + CATEGORY                   N    DEV'N  ETA   DEV'N   BETA   DEV'N   BETA

QI1
     1                               70    -0.80        -0.86
     2                               65     1.58         1.58
     3                              207    -0.22        -0.20
                                                  0.17          0.17

QII1
     1                              103     0.18         0.22
     2                               62    -0.16        -0.25
     3                              177    -0.05        -0.04
                                                  0.03          0.04

MULTIPLE R SQUARED                                              0.030
MULTIPLE R                                                      0.173
```

```
           * * *  A N A L Y S I S   O F   V A R I A N C E  * * *

             SUM37
        BY   QI1
             QII1

                                        SUM OF                  MEAN             SIGNIF
SOURCE OF VARIATION                    SQUARES      DF        SQUARE        F     OF F

MAIN EFFECTS                           226.892       4        56.723    2.574    0.038
   QI1                                 221.631       2       110.816    5.029    0.007
   QII1                                  9.134       2         4.567    0.207    0.813

2-WAY INTERACTIONS                      33.701       4         8.425    0.382    0.821
   QI1       QII1                       33.701       4         8.425    0.382    0.821

EXPLAINED                              260.593       8        32.574    1.478    0.164

RESIDUAL                              7338.053     333        22.036

TOTAL                                 7598.646     341        22.283

    347 CASES WERE PROCESSED.
      5 CASES (  1.4 PCT) WERE MISSING.
```

Pearson Correlation Coefficients

	QI 1.1	QI 1.2	QI 1.3	Total # of Teachers Evaluated
SUM37	-.2386	.0279	.0959	.1063
	(71)	(65)	(211)	(347)
	p=.023	p=.413	p=.083	p=.024
PROCESS	-.2213	.1053	.0722	.1648
	(71)	(65)	(211)	(347)
	p=.032	p=.202	p=.148	p=.001
IMPRVT	-.2505	.0465	.1015	.0987
	(71)	(65)	(211)	(347)
	p=.018	p=.356	p=.071	p=.033
TEACH	-.2380	.0838	.1237	.0465
	(71)	(65)	(211)	(347)
	p=.023	p=.253	p=.036	p=.192

Pearson Correlation Coefficients

	QI2	QI3	QI4	QI5	QI10
SUM37	-.0067 (347) p=.450	.1445 (347) p=.004	.0311 (347) p=.282	.0773 (347) p=.075	-.0576 (345) p=.143
PROCESS	.0147 (347) p=.392	.1518 (347) p=.002	.0887 (347) p=.049	.1507 (347) p=.002	-.0301 (345) p=.289
IMPRVT	-.0128 (347) p=.406	.0883 (347) p=.050	.0554 (347) p=.152	.0644 (347) p=.116	-.0690 (345) p=.100
TEACH	-.0031 (347) p=.477	.0273 (347) p=.306	.0508 (347) p=.173	.0285 (347) p=.299	-.0651 (345) p=.144

	QI11	QII4	QII5	QII6	QII7
SUM37	-.2149 (347) p=.000	.1286 (327) p=.010	.2975 (338) p=.000	-.0930 (308) p=.052	-.1092 (340) p=.022
PROCESS	-.2348 (347) p=.000	.1081 (327) p=.025	.2950 (338) p=.000	-.0520 (308) p=.181	.1601 (340) p=.002
IMPRVT	-.1881 (347) p=.000	.1512 (327) p=.003	.2853 (338) p=.000	-.0462 (308) p=.210	.0825 (340) p=.064
TEACH	-.1145 (347) p=.017	.1873 (327) p=.000	.2725 (338) p=.000	-.0302 (308) p=.299	.0868 (340) p=.055